

Evolution

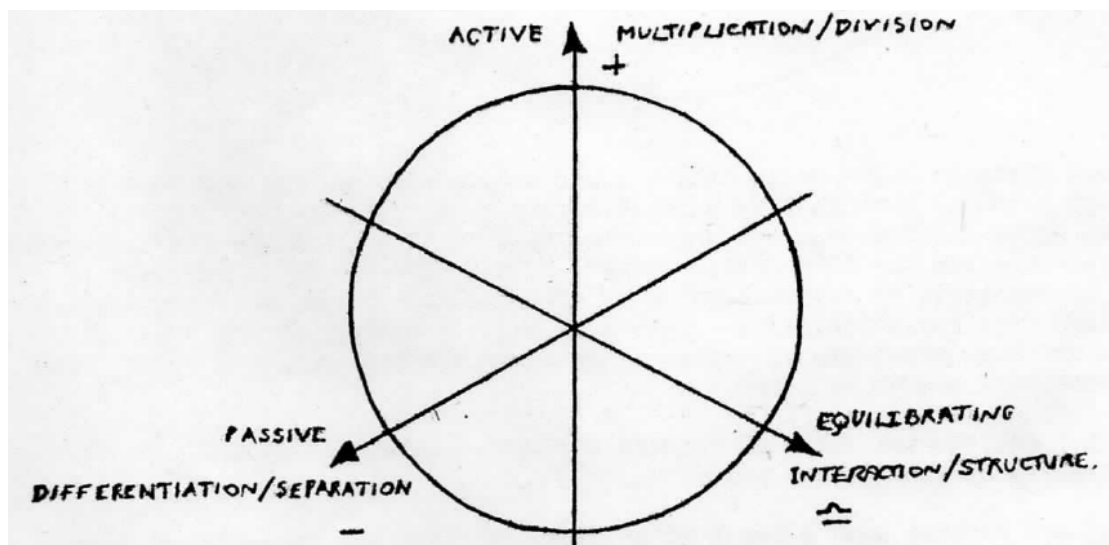
“The Tao begot one,
One begot two,
Two begot three,
And three begot the ten thousand things.
The ten thousand things carry yin and embrace yang.
They achieve harmony by combining these forces.”

- Tao Te Ching

INTRODUCTION

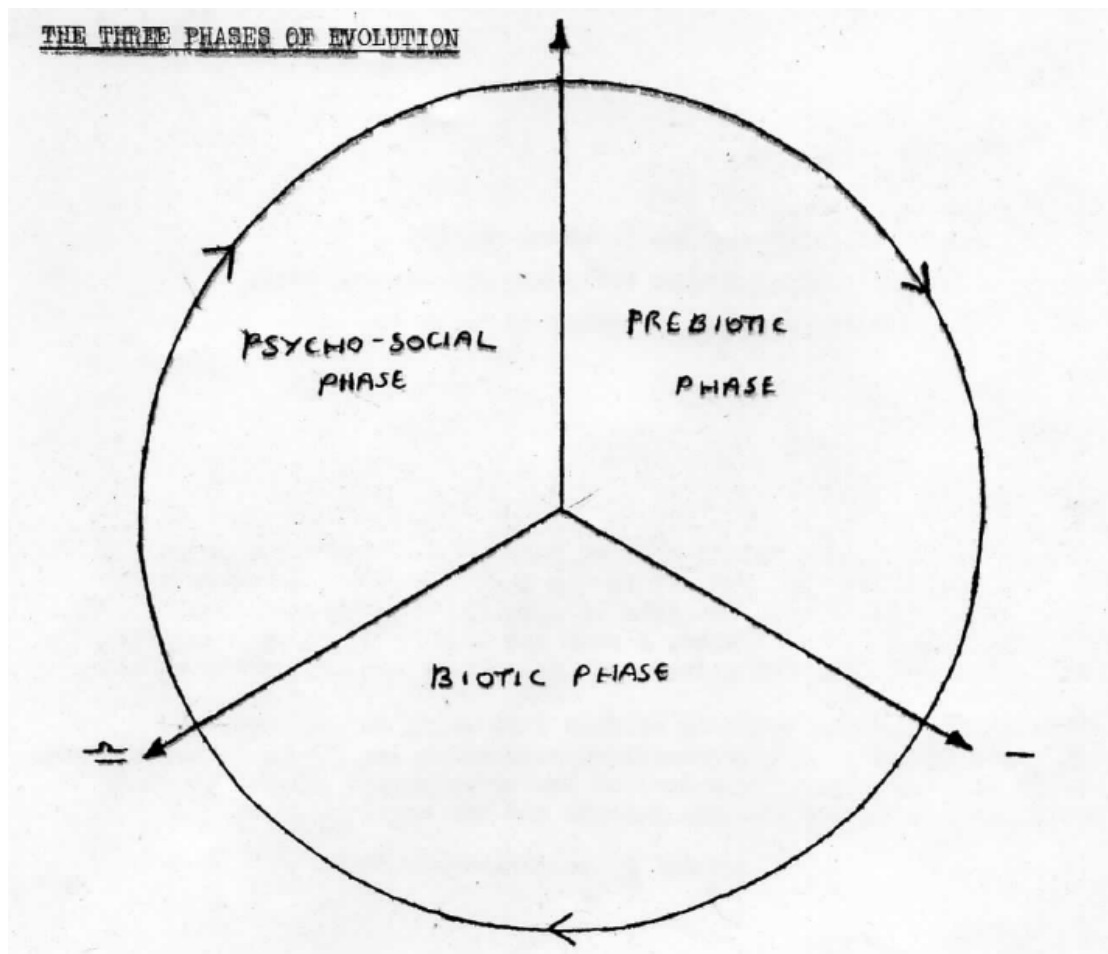
It is a matter of common belief that we live in an evolving Universe. “Evolution” means ‘to turn out of’ or ‘to grow out of’. Nowadays this tends to be associated with the idea of complexity developing from simplicity. This is, of course, a very old idea. It is only recently, however, that evolution has gained wide acceptance in our present culture.

In Saros Philosophy evolution is divided into three sub-processes: multiplication/division, differentiated/separation and interaction/structure. These can be seen as manifestations of the three forces present in Unity at every level - the active, the passive and the equilibrating.



I have found that the scientific data can quite readily be interpreted in this manner.

Furthermore, Saros Philosophy analyses developmental processes into stages delineated by 'shock points'. The simplest analysis is into a three stage process. This fits quite neatly with three distinct phases of evolution.



The first phase is begun by an active shock - the 'Big Bang' of contemporary cosmology. There then follows a phase during which the elementary units produced after the Big Bang are aggregated into more and more complex integrations. This I have called the "Pre-Biotic Phase". It culminates in the genesis of life - arrangements of matter capable of self-maintenance and self-propagation (the first true individuality). This is a passive shock - on the basis of what we now know about the Universe, it seems inevitable that life would arise in it somewhere sooner or later.

There then follows the phase of classic biological evolution giving rise to the diversity of life we see around us.

Life has now reached such a level of inter-relatedness and integration, both as a whole and within certain of its individual units, that a third phase has been made possible: Psycho-social evolution. This is an equilibrating shock.

The Three Forces can be seen acting in each phase as a whole. Each phase can be interpreted in terms of the three processes.

The 3 Forces/Processes in Evolution

PHASE	LEVEL	ACTIVE: MULT/DIV	PASSIVE: DIFF/SEP.	EQUILIBRATING: INT/STRUCT
PRE-BIOTIC	ASTRONOMY	EXPANSION OF SPACE - TIME CARRIES MATTER ALONG WITH IT.	GRAVITY CAUSES DIFF ² OF EXPANDING GAS CLOUD.	EMERGENCE OF STRUCTURES: CLUSTER → GALAXY → STAR → <u>PLANET</u>
	ELEMENTS	INCREASE IN NUMBER OF ELEMENTS	INCREASE IN NUMBER OF TYPES OF ELEMENT.	INTERACTION OF ELEMENTS GENERATING STRUCTURES: ELEMENTARY PARTICLES → ATOM → <u>MOLECULE</u>
BIOTIC PHASE	GENERAL	PROGRESSION OF REPLICATION (D.N.A.)	VARIATION PRODUCED BY RANDOM MUTATION & SHUFFLING OF GENES.	NATURAL SELECTION - DIRECTION OF EVOLUTION.
	CELL LEVEL	PROGRESSION OF CELLS	SPECIALIZATION.	FIRST ECOSYSTEMS.
	ORGANISM - GENERAL TRENDS	INCREASE IN NUMBER OF ORGANISMS.	INCREASE IN NUMBER OF TYPES OF ORGANISM.	INCREASING INTERDEPENDENCE OF ORGANISMS - BIOSPHERE.
	TRENDS WITHIN ORGANISMS THEMSELVES	INCREASE IN NUMBER OF CELLS IN ORGANISM. INCREASE IN SIZE OF ORGANISM.	INCREASING NUMBER OF TYPES OF CELL IN ORGANISM.	QUALITATIVE CHANGES: (1) CENTRALIZATION OF CONTROL - DEVELOPMENT OF CENTRAL NERVOUS SYSTEM. (2) INCREASING BEHAVIOURAL COMPLEXITY. (3) ↑ RATIO LEARNED / INSTINCTIVE BEHAVIOUR. (4) ↑ AUTONOMY - DEVELOPMENT OF HOMEOSTASIS (TREND TOWARDS REGULATION FROM WITHIN RATHER THAN WITHOUT - "LIBERATION" FROM ENVIRONMENT. (5) ↑ ABILITY TO MANIPULATE ENVIRONMENT (6) ↑ PARENTAL CARE (7) ↑ ALTRUISTIC BEHAVIOUR (8) ↓ REGENERATIVE CAPACITY (9) ↑ CONSCIOUSNESS, AWARENESS, INTELLIGENCE.
	GROUP (INSTINCT BASED GROUPINGS)	↑ SIZE OF GROUP IN TERMS OF NUMBERS & IN TERMS OF TERRITORY OCCUPIED. TERRITORIAL WARFARE. - EMPIRE BUILDING	DIFFERENTIATION OF FUNCTION WITHIN GROUP (e.g. CASTES IN ANTS, NEST) DEFENCE OF GROUP TERRITORIAL WARFARE	SOBUSTICATED INTRASPECIFIC COMMUNICATION (e.g. SIGNALS IN WOLF PACK - POSITION OF TAIL) EMERGENCE OF SOCIAL STRUCTURES.
	CULTURE (DEPENDS ON INHERITANCE OF LEARNED BEHAVIOUR)	SPREAD & DEVELOPMENT OF IDEAS, SKILLS, RITUALS ETC. IDEOLOGICAL WARFARE - HOLY WARS, CAUSIDES, TERRORISM.	DIFFERENTIATION INTO DISTINCT CULTURES & SUBCULTURES ETC. IDEOLOGICAL WARFARE - WHITES, HUNTS, INQUISITIONS	WORLD POLITICAL & ECONOMIC STRUCTURE.
PSYCHO-SOCIAL PHASE.	GLOBAL / FUTURE LEVEL	COLONISATION OF SOLAR SYSTEM - EXPANSION OF SPACE - COSMIC AWARENESS.	LIMITATIONS OF HEAVILY POPULATED PLANET - ECOLOGICAL AWARENESS	INCREASINGLY INTEGRATED WORLD CIVILIZATION. - ASSOCIATED WITH SOBUSTICATED COMMUNICATION SYSTEMS. - SOCIAL AWARENESS.

THE GENERAL TREND IN EVOLUTION

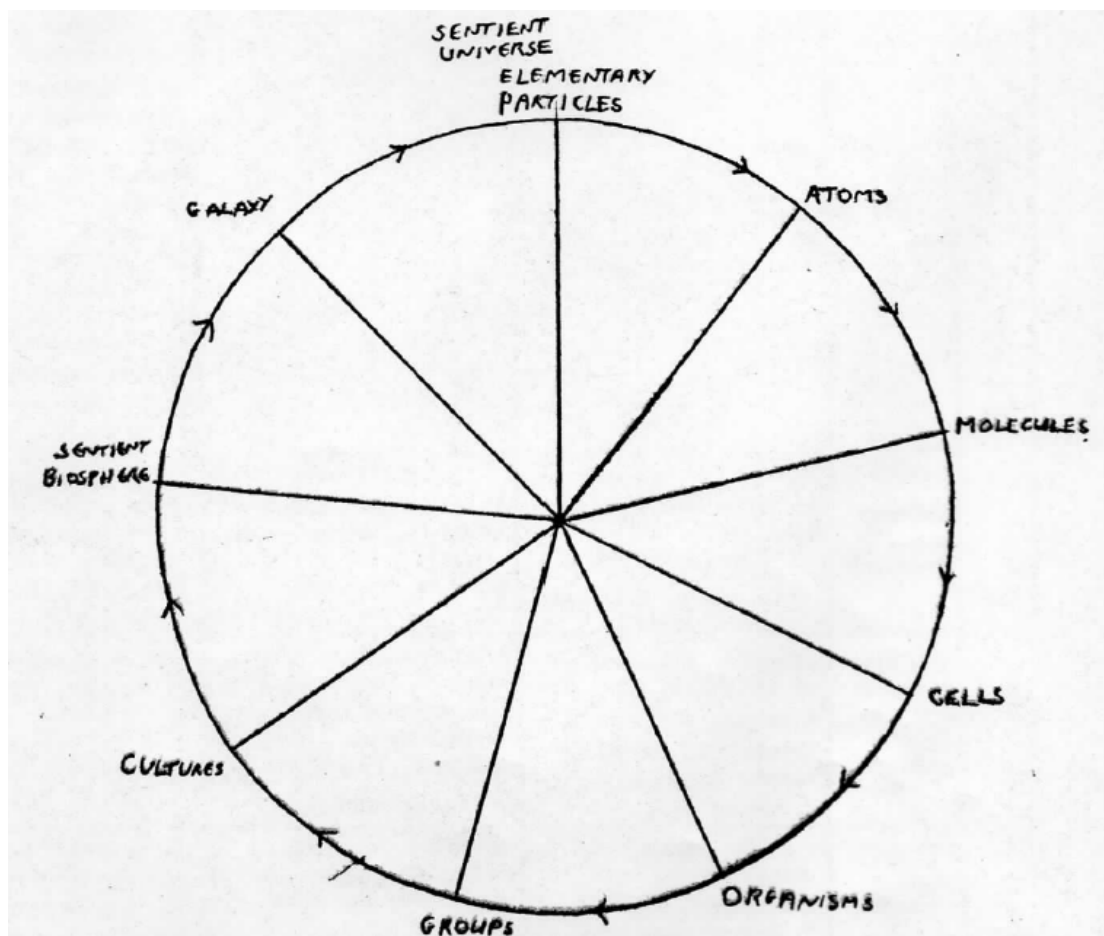
It appears that there are two parallel processes in the Universe. On the one hand there is a process of diversification - a continuous disintegration of the Unity obtaining prior to the Big Bang.

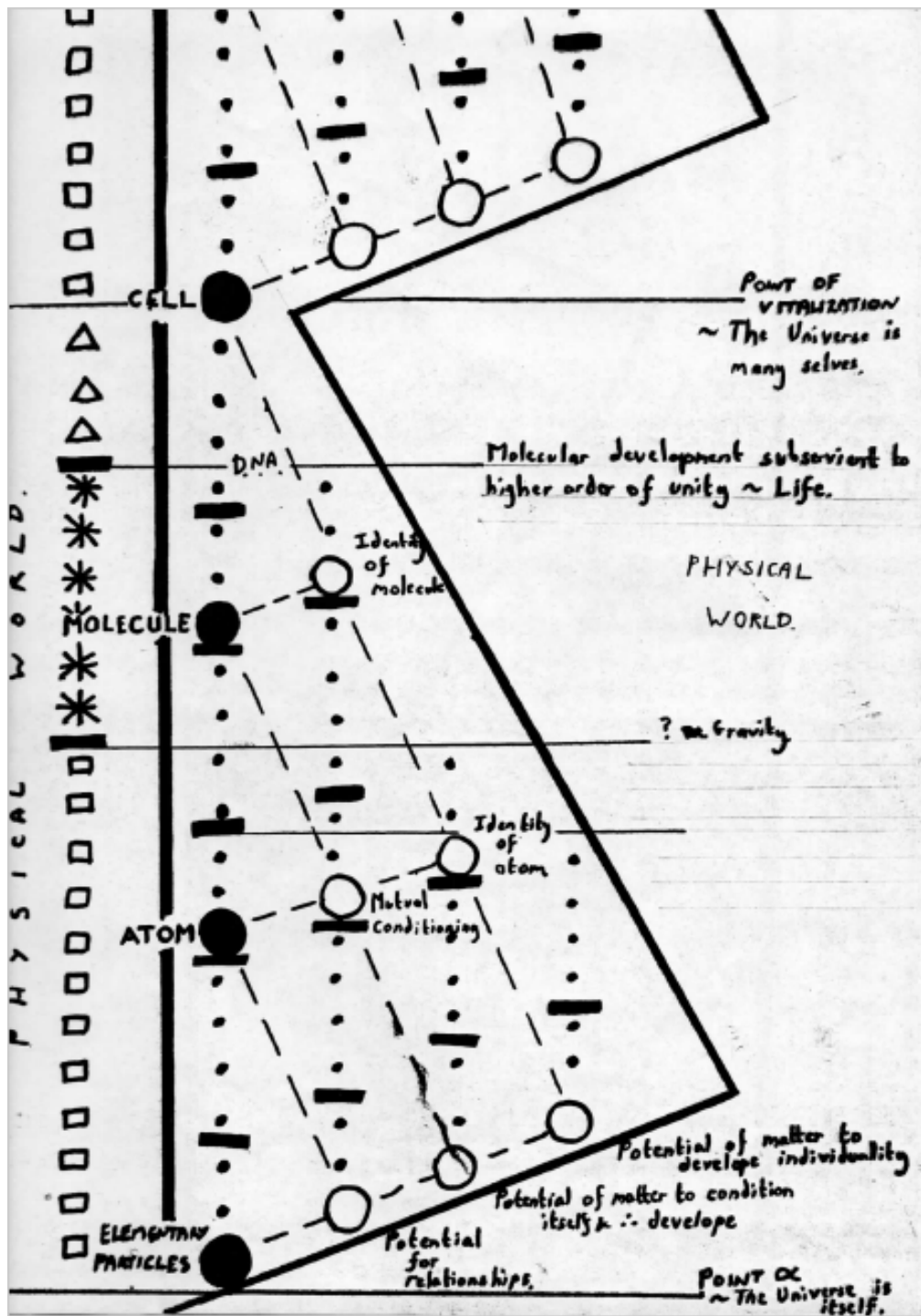
On the other hand there is a process of progressive unification of the diversity and multiplicity produced. To put it another way, there has been an increase in the size of the unit of integration, larger units including smaller ones within themselves and in turn becoming part of something bigger. This idea has occurred to a number of people and a number of names have been coined for 'unit of integration', e.g. 'System' (General Systems Theory), 'Integron' (Francois Jacob - French Geneticist), 'Holon' (Arthur Koestler), 'Corpuscle' (Teilhard de Chardin - Jesuit priest/palaeontologist), 'Level of Unity' (Saros).

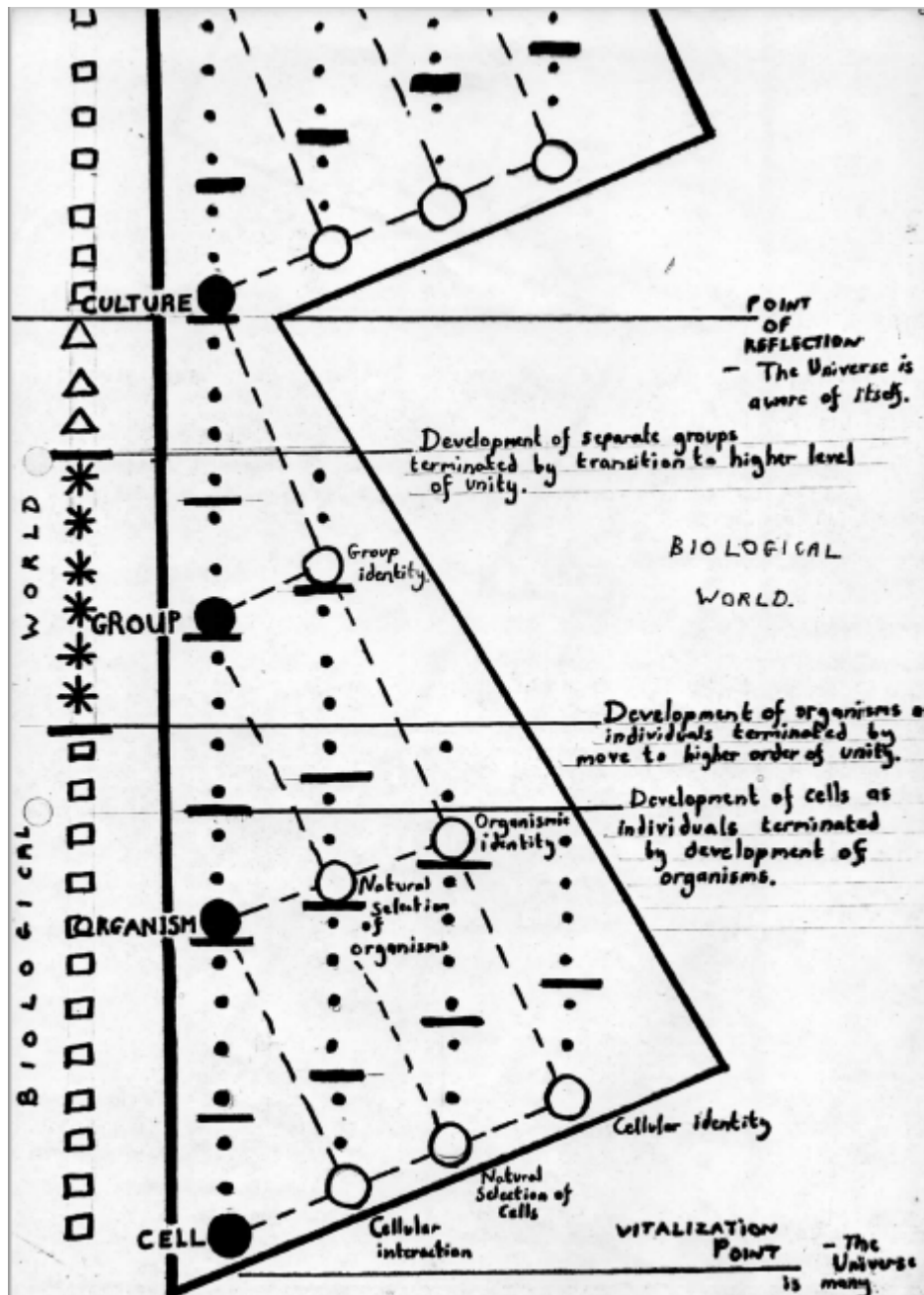
As the French Philosopher, Henri Bergson, so poetically put it: "We live in a Universe that is making itself within a universe that is unmaking itself: self integrating multiplicity within self differentiating unity".

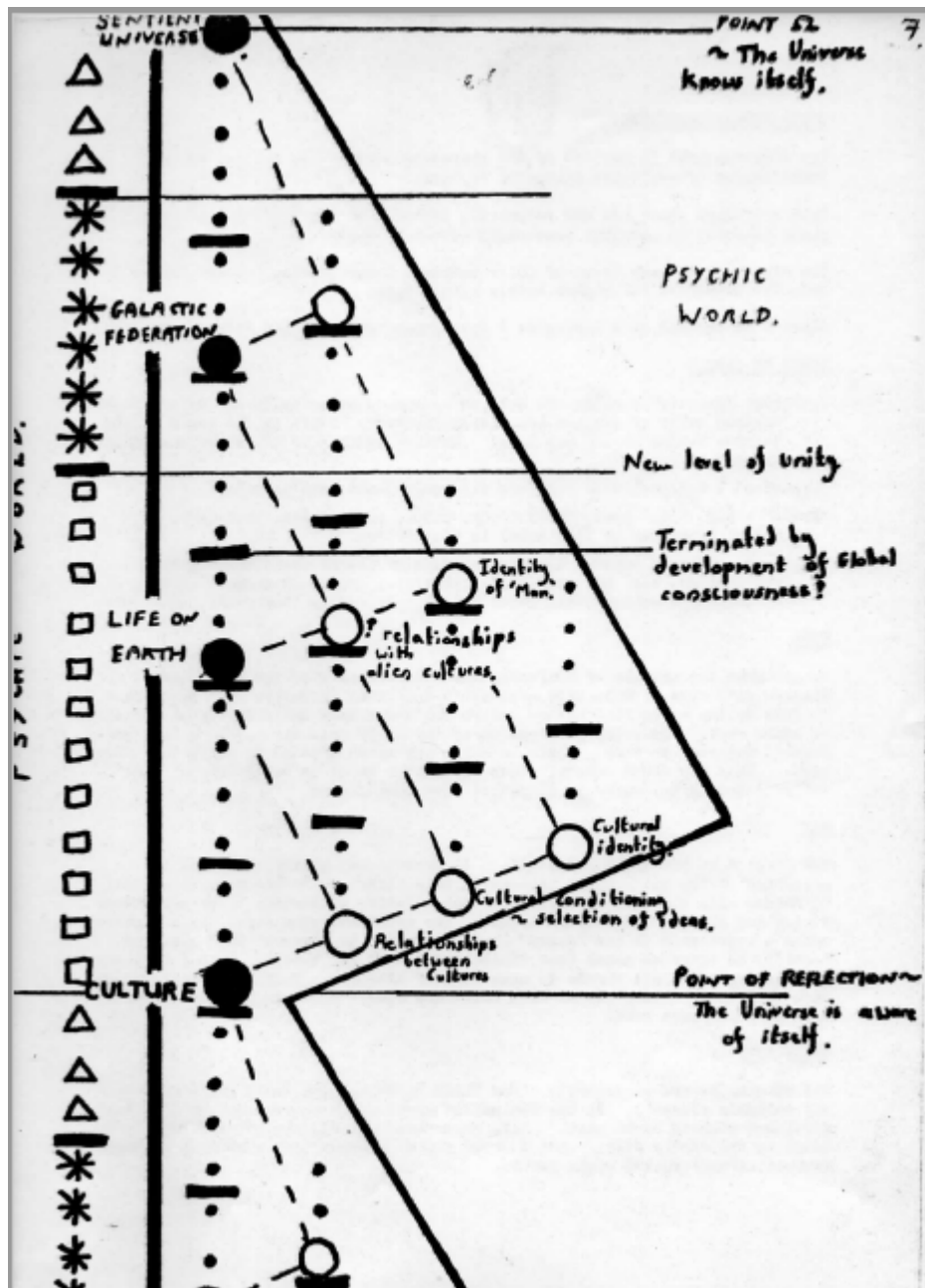
Suffice to say that this is all related to the mysteries of ascending and descending octaves, the laws of energy transformation, original sin and the nature of time.

The following diagram shows the main stages of the integrative process and the structure that emerges out of their interaction.









INTERACTION/STRUCTURE

The 3 tetraktyses (pyramids) of the preceding diagram are related to the three phases of evolution mentioned earlier.

Each tetraktys shows how the potentials inherent at the beginning of each phase interact to generate increasing levels of Unity.

The structure of each level of unity embraces lower levels. Lower levels have the potential for higher levels within them.

Since I am trained as a biologist I have concentrated on the second tetraktys.

NOTES ON LABELS

‘Cellular Identity’ - cells are able to recognise other cells and differentiate between cells of similar and dissimilar type. This is the basis of the defence system of our own body. Another example is the sperm recognising the egg.

‘Organism’ - multicellular lifeform i.e. most plants and animals.

‘Group’ - e.g. ants’ nest, herd, flock, shoal, pack, tribe, pride etc. Social behaviour at this level is instinctive.

‘Culture’ - culture implies the transmission of learnt experience between generations, e.g. customs, skills, beliefs, codes, language. Many animals have reached this level but it only really “takes off” in humans.

TIME

Do not make the mistake of confusing the vertical axis of the Tetraktyces diagram with time. This axis represents the level of Unity. It is related to time in the sense that higher orders don’t manifest until the establishment of lower ones. However, progression up the Unity axis may not be a straight-forward sequence in time. Life on Earth may reach a level of Unity then drop back. This may occur several times before the level is established. The entire sequence may never be completed from this planet.

MAN

The diagram is not anthropocentric. At present Man appears to be at the spearhead of the integrative process on this planet. He has been presented by Nature with a choice of whether or not to carry it further. He may choose to try and stay at the culture level. The resultant stagnation would probably cause a regression to the ‘group’ level. He may be ‘forced’ into a higher level by an external shock (see ‘Childhood’s End’ and ‘2001’ - Arthur C. Clarke). Alternatively man may choose to make himself extinct. Doubtless Nature would soon fill the “culture” level with something else - a clever octopus?, the self-aware termite nest?

THE PLANET

The diagram is not geocentric. For ‘Life on Earth’ you could read ‘Life on any suitable planet’. At the ‘Galactic’ level lines of development from many different planets could meet. Life from these planets may not necessarily be based on the carbon atom. But I would hazard a guess that a broadly analogous process of unification would occur.

TERMINATION OF OCTAVES

Again, I have concentrated on the biological tetraktys, I've stated that "Development of organisms as individuals terminated by move to higher order of unity". What is this 'higher order of unity'? The world ecosystem? (has life at this point become so interrelated that "no man is an island?)"

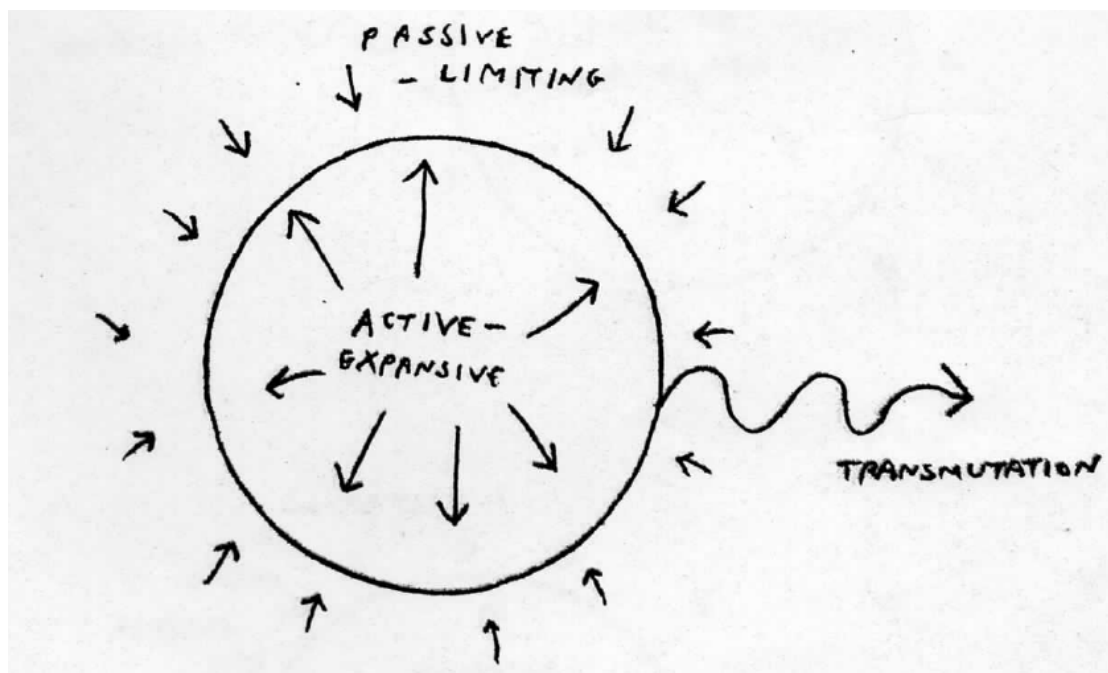
Group consciousness?

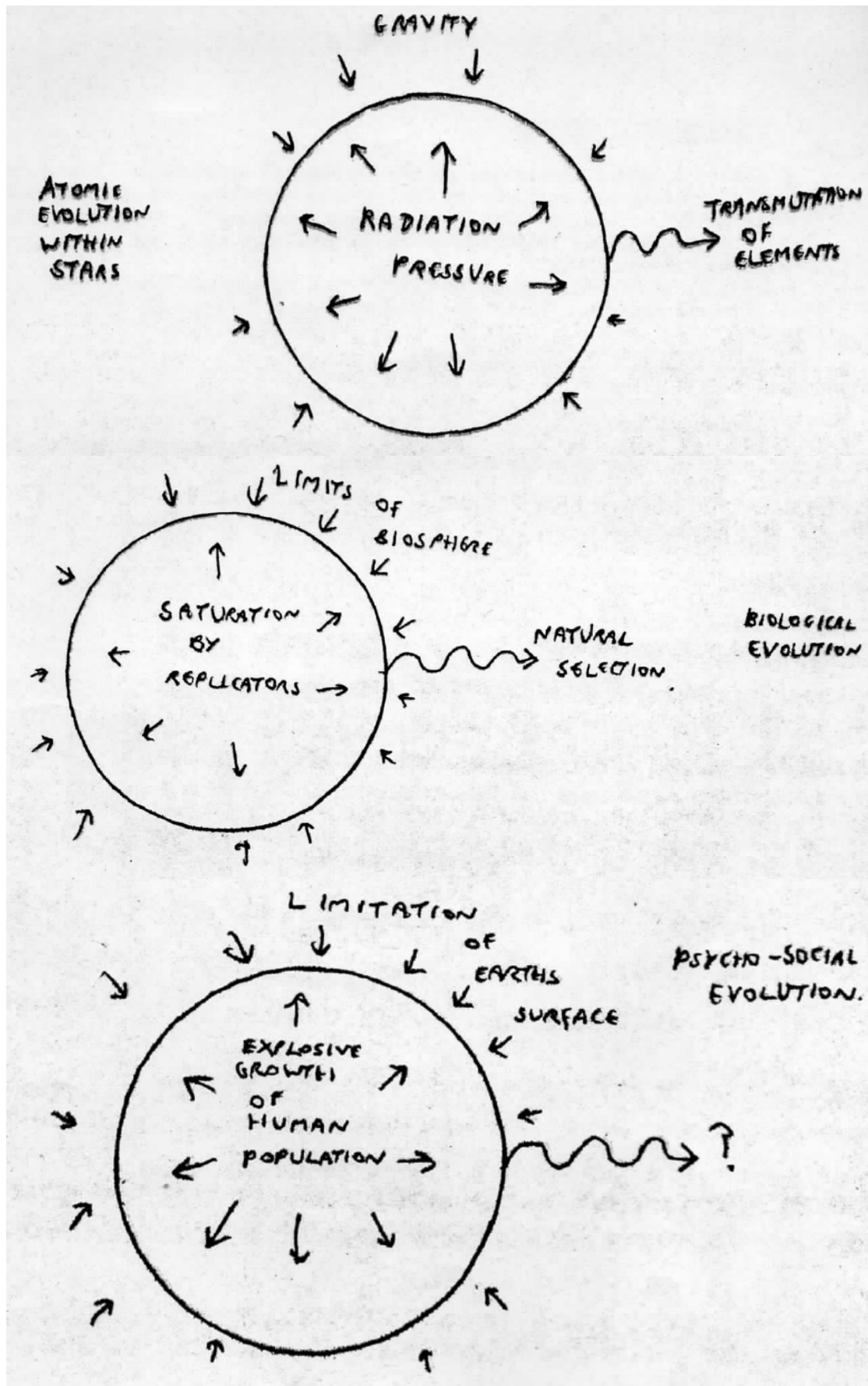
What is the higher 'level of unity' that terminates development of groups as separate units? 'Mind' predominating over instinctive genetic programming?

RENAISSANCE - TRANSITION POINTS

At the major transition points of 'cell' and 'culture' a new form of evolution becomes possible.

The terms point α and Ω are stolen from Teilhard de Chardin's 'Man's place in Nature'. Another interesting idea of his is that at crucial points in evolution a build up of 'pressure' causes transmutation. Chardin believes Man is now at such a point in his development. The following diagrams interpret the idea in Saros Philosophy terms.





EVOLUTION COMPARED TO INDIVIDUAL DEVELOPMENT

Just as different facets of the ego can be integrated to form the psyche cells can be integrated into organisms. The group level corresponds to that of essence in the individual. In both cases the problem of morality arises at this point.

MAN'S EVOLUTION

The whole of human culture can be compared to the ego of an individual. Both have many facets. Man's evolutionary past can be compared to the sub-conscious of an individual. In becoming aware of his instinctive conditioning Man is growing into the 'Conscious Tetraktys'.

THE SIGNIFICANCE OF MAN

It is fashionable nowadays to put Man down. There are two basic put-downs: the 'objective', 'scientific' put-down and the 'moral' put-down. Both negative attitudes spring from too small a view.

The Scientific Put-down - put in a nutshell it says: "the universe is a very big place and man is insignificant". When the world is seen as a static structure this is true. Man is merely one species among many on a planet of an average solar system etc. However the world is not really a static structure. It is a dynamic creative process and man is at the spearhead of that process on Earth. Furthermore Man stands at the transition point to a totally new phase of evolution - psycho-social evolution. (This entails the transmission of acquired characteristics and is therefore much more rapid than Darwinian evolution).

The Moralist Put-down - Man is bad "because he is destroying the earth and is out of harmony with nature. Such people usually have a very small view of nature - i.e. certain landscapes that they find pleasing. However, against a backdrop of black holes, supernovae, ice ages and mass extinctions the efforts of man at destruction are insignificant. Man is incapable of damaging 'nature'. The worst he can do is remove himself from the evolutionary drama.

Again this is essentially a static view of Nature - conserving the present configuration of the biosphere. But when the sun swells up into a Red Giant all terrestrial life will be vaporised unless the technology of sentient beings has carried it elsewhere to start afresh.

CHANCE AND ORDER

It is a common misunderstanding that the theory of evolution implies that life and man arose by chance. It doesn't imply this at all. Random shuffling of genes during

sexual reproduction and chance genetic mutations provide the raw material for evolution - variations upon which natural selection can act. But it is natural selection not variation that determines the direction of evolution. Natural selection is anything but random. It is a process which produces life-forms suited to their environment. Man hasn't arisen by chance. From the beginning of its development the Universe was so constructed that it would be capable of scrutinising itself.

Man is not as he is due to chance but due to basic Universal laws, or to put it another way because we exist as conscious observers the Universe must appear to us in a certain way (see the "Anthropic Principle" of modern physics).

In any case, natural selection is not the only force at work in evolution.

EVOLUTION VERSUS RELIGION

In Western society conflict has often arisen (as it has recently in the USA) between the scientific cosmology and religious cosmology. Put simply, science says we evolved over ten billion years; religion says we were created by God. A simple way out of this dilemma is to say religion is rubbish. At the other extreme one can deny the scientific evidence - fossils were put in the rocks by the Devil to try Man's faith.

Various attempts have been made to marry the two cosmologies. This typically involves sticking God behind the Big Bang. (The Big Bang theory incidentally was first proposed by a Belgian priest - Abbe Lemaitre, just as the mechanism of genetics was worked out by a monk. Darwin himself was an extremely religious man).

Having set the Big Bang in motion God can relax and watch the Universe unfold automatically. God may be brought in from time to time to explain events that seem unlikely. This has uncharitably been dubbed the "God of the Gaps" Theory. None of these solutions seems satisfactory.

Perhaps the problem arises out of seeing God's creation as a process in time - since our own acts are constrained in this way. Whenever we think of God creating the World we have at the back of our minds the analogy of the potter at his wheel or the carpenter at his bench. But God's creativity does not occur within time - it creates time and space.

The creation of the Universe didn't just occur at some remote point in the past - it is occurring now. Out of our present moment of structure we can reconstruct a past and hypothesise a future but all is being created and sustained at this instant.