

10 June 1968

READING 5

At our last meeting before the Whitsun holiday (Reading 4) we touched on the question of whether there could exist in every individual person a Memory much more permanent than the storage of sensory information which we use from day to day. This week I want to ask whether there could be any connection between two descriptions of such a memory – one ancient and one very modern. My reason for attempting this just now, when you have been sending in accounts of ‘peak experiences’, is that we frequently hear people saying at meetings: ‘I cannot recall anything like that’ – as if for them it didn’t exist! I would like them to convince themselves that they (like everybody else) have such experiences in store, and if they can’t recall them they just haven’t gone about it in the right way!

PART 1. THE PLATONIC IDEA

The basis of Platonism was the Socratic doctrine: ‘*Goodness is Knowledge*’, and the Platonic Theory of Ideas is described by Aristotle as Pythagorean teaching modified by Socratic influence.

We learn moreover from Aristotle that Plato in his youth had adopted the Heraclitean principle that all sensible things (sense data) are in a perpetual flow of change, so that there can be no (permanent) knowledge of them: and Aristotle adds that in later life he held fast to this opinion... Plato was not seeking a basis for any science of the sensory world – not laws of Nature, if by that we mean formulas describing the sequence of sensory phenomena or anything of that sort. The theory grew into a doctrine of an intelligible ‘nature of things’ consciously opposed to the materialism which identified reality with the elementary components of tangible bodies – a theory of ideals to regulate conduct. *Socrates had been convinced that all men, if their minds could be cleared of the mists of prejudice and false beliefs, would see the true end of life and could not fail to desire it.*

(*Principium Sapientiae*, F. M. Cornford, Cambridge University Press, 1952)

[NOTE: We see here a reflection of the much older teaching of the Tradition of the Meditation and of our own System, in sharp contrast to observational science in its pursuit of ultimate particles or receding galaxies.]

When Plato founded the Academy in Athens shortly after his return from a first visit to Italy and Sicily in 388 or 387 BC, he was much under the influence of the mathematicians of Cyrene and of the Pythagoreans in Southern Italy and Sicily, so that for him:

... mathematics expressed a system of truths which belong to a supersensory world, accessible to our intelligence, but not to the organs of sight or touch or hearing... But though he already possessed something like a hypothesis, philosophy always remained for Plato, a pursuit of wisdom, not a closed or final doctrine. Some of the adventures of this pursuit are recorded in the great dialogues of his middle period – the *Meno*, *Phaedo*, *Symposium*, *Republic* and *Phaedrus*... It seemed quite clear to Plato that knowledge of the kind Socrates sought, could never be accounted for by the apparatus of any [‘scientific’ or] empirical theory. Goodness cannot be perceived by any sense, and a

definition of it cannot be distilled out of accumulated impressions of colours, sounds and so on stored in the records of our personal experience...

(*ibid*)

In the *Meno* he asks the questions:

How is it that the geometer, shutting his eyes and thinking about objects he has never seen or touched, can discover fresh truths he has not heard from any teacher? Plato argued that it must come out of the mind itself; it is raised into Consciousness by some process analogous to that whereby we recall some object we have formerly known and have forgotten. This is the famous doctrine that 'learning' is Recollection (*anamnesis*). Memory containing this knowledge of Truth is not the personal memory, the waxen tablets of the empiricist which register sense impressions and all the information we have 'learnt' since birth. The memory that is Recollection is an impersonal memory. Its contents are the same for all human beings... The only difference between individuals will lie in the extent to which the latent knowledge has been recovered. *According to the Meno, the whole of knowledge can be recovered in this way... The structure of Truth forms a coherent system in which the parts are linked together by logical necessity. The recovery of a single link may be enough to lead the mind on to further Truths without limit.*

(*ibid*)

It is a most profitable line of enquiry to ask for some examples of that 'Coherent system of ideas' which are latent in the human mind and which can be recovered as contrasted with the information we are taught at school, such as (Plato says) the date of the battle of Marathon.

(Pause for discussion and try to find examples)

The idea that *Time is a Circle* keeps recurring in Athens during the 200 years between about 530 BC under Pythagorean influences, via Anaxagoras (who taught for 30 years and was supposed to have been the teacher of Socrates as well as Pericles), Plato at his Academy, and on to Aristotle's Peripatetic School at the Lyceum (336–322 BC).

An early historian sums up the Pythagorean teaching of this idea as follows:

Light and Darkness, Hot and Cold, Dry and Moist are elements that have equal portions in the Cosmos. Of these, the prevalence of the Hot gives Summer; of the Cold, Winter; of the Dry, Spring; of the Wet, Autumn. In each case there is a cycle of Becoming, which Aristotle illustrated as follows:

We observe in Nature a certain kind of 'Circular process of Coming-to-be' (*cyclotis genesis*)... When the Earth had been moistened, an exhalation was bound to arise; and when an exhalation had risen, cloud was bound to form, and from the formation of cloud, rain naturally resulted, and by the fall of the rain, the Earth was necessarily moistened; but this was the starting-point, so that a circle is completed.

(*Analytica posteriora*. B.12, 95 b.38)

And in *De Degeneratione et Corruptione* he goes further:

The cause of this perpetual coming-to-be... is circular motion: for that is the only motion which is continuous, ... For when water is transformed into air and air into Fire (steam) and the steam back into water again, we say the genesis 'has completed the circle', because it reverts again to the beginning...

It is in circular motion, therefore, and in cyclical coming-to-be that the 'absolutely necessary' is to be found... The result we have reached is logically concordant with the Eternity of circular motion, i.e. the Eternity of the revolution of the heavens... And since the revolving body is always setting something else in motion, the movement of the things it moves must also be circular.

This '*circular process of coming-to-be*' is, of course, essential to an understanding of the Law of Octaves, for every octave is a circle from Do to Do, but usually involving a change of frequency and density so that it constitutes 'Repetition with a difference'. This was the reason for the link in the Pythagorean system between Music, Number (*Arithmos* = repetition), and the Recurrence of Lives as in the passage from Simplicius quoted by P. D. Ouspensky:

The Pythagoreans said that the same things are repeated again and again.

In this connection it is interesting to note the words of Eudemus, Aristotle's disciple (in the 3rd book of *Physics*). He says: Some people accept and some people deny that time repeats itself. Repetition is understood in different senses. One kind of repetition may be in the natural order of things (*eidos*), like repetition of summers and winters and other seasons, when a new one comes after another has disappeared; to this order of things belong the movements of the heavenly bodies and the phenomena produced by them, such as solstices and equinoxes, which are produced by the movement of the sun. [He means the earth of course!]

But if we are to believe the Pythagoreans there is another kind of repetition. That means that I shall talk to you and sit exactly like this and I shall have in my hand the same stick, and everything will be the same as it is now and time, as it can be supposed, will be the same. Because if movements (of heavenly bodies) and many other things are the same, what occurred before and what will occur afterwards are also the same. This applies also to repetition, which is always the same. Everything is the same and therefore time is the same.

(*New Model*, p.468)

Ouspensky's comment, you remember, was:

These two kinds of Repetition which Eudemus called 'repetition in the natural order of things' and 'repetition in number of existences', are of course repetition in Time and repetition in Eternity.

It is revealing that the major scientific advances have so often resulted from intuitions based upon spherical Space, circular Time or circular Motion. The Copernican model of the Solar System; Einstein's curved Space-time, and the more recent model of the Milky Way as a Spiral Nebula; the 'Periodic' Table of Elements; the Rutherford-Bohr model of the Atom; Kekulé's Benzene ring as the basis of Organic Chemistry; and now the 'double helix' of DNA coiled up in the nucleus of every cell.[†]

In conclusion it should not be forgotten that Plato himself gave a very practical description of the cultivation of anamnesis or recollection, which includes an intuition about the three Gunas or elements;[‡] 'the dreams of lawless appetite, the beast which has shaken off the control of reason,' are contrasted with those of:

A man sound in body and mind, who before he goes to sleep, awakens the understanding within him to feed on high thoughts and questionings in collected

[†]*The Double Helix*, James Watson, 1968

[‡]*Republic*, 9: 571D

contemplation. If he has neither starved nor surfeited his appetites, so that, lulled to rest, no delights or griefs of theirs may trouble that better part, but leave it free to reach out, in pure and independent thought, after some *new knowledge of things past, present, or to come*; if, likewise, he has soothed his passions so as not to fall asleep with his anger roused against any man; if, in fact, he does not take his rest until he has *quieted two of the three elements in his Soul and awakened the third wherein wisdom dwells*, then he is in a fair way to grasp the truth of things, and the visions of his dreams will not be discordant.

This goes a long way further, for instance, than Arthur Koestler's demonstration of the *Creative Process* (BBC2, Horizon, Tuesday, June 4th). History certainly does 'repeat with a difference', which may be more *detailed* but is not always more *true* even after nearly 24 centuries!

(The word 'intuition' is here kept for the glimpses of Truth which come by Recollection.)

PART 2. A CONTEMPORARY LINE OF THOUGHT

Where can we look for some prenatal store of memory in individual units of organic life from virus to man? At present the only place we can look with the certainty of well-established fact is in the nucleus of a cell. We know that in a human being there are very many different kinds of cell, all performing extremely different functions, looking and behaving very differently. And yet all these kinds of cell start from a single fertilised egg by successive divisions – first into two, then into four, then into eight and so on. Yet we know that all the cells in a given organism have the same information in them, for in their nuclei are the same molecules of nucleic acid which is the 'information carrier of living cells, the repository of the blueprint which has to be passed on.'

Let me quote the analogy discussed by the Nobel Laureate, John Kendrew, in his series of BBC Television Lectures:

We have called DNA the Thread of Life, but now let us think of it instead as the *Book of Life*. Think of an amino acid, or its equivalent triplet of bases, as a word. Then a protein molecule, containing a few hundred amino acids, would be roughly equivalent to a paragraph in the book. And we can think of an operon, the group of genes specifying a particular group of enzymes, as a few, say five or ten, paragraphs, perhaps 1000 words in all – about a page of our imaginary book.

On this basis, the nucleic acid in a virus, which might have about a couple of hundred thousand base pairs altogether, would amount to a thin book of sixty or seventy pages. A bacterium has a much more complicated genetic apparatus, and might be equivalent to a substantial volume of a few hundred or even a few thousand pages. If we now turn to a man, every cell in the human organism has something like two thousand million base pairs in it, contained in forty-six chromosomes. In terms of our analogy this would be equivalent to a very large encyclopaedia indeed, an encyclopaedia of forty-six volumes. And they would be positively gigantic volumes, averaging perhaps 20,000 pages each (Figure 18). Every cell in the human body is provided with the whole encyclopaedia, the whole set of chromosomes. And we have to imagine that most of the time most of the pages of the encyclopaedia are shut – the great majority of the genes are not operating. Just every now and again one page is opened, the genes on that page come into operation and produce a set of enzymes for a particular metabolic pathway which

the cell requires. What opens the pages is our system of regulator genes and operators. The operators can be likened to headlines, and the regulator genes to cross-references.

Why does a human cell need a huge encyclopaedia of instructions while a bacterium can get along with one volume? – after all, in a single human cell at any one time the number of different kinds of protein molecule, a few thousand probably, is not greater than the number in an individual bacterial cell, so the number of pages of the human encyclopaedia which are open in any given cell at any given time need be no greater than in the bacterium. But man needs a far bigger encyclopaedia than does a bacterium, because man is a much more complicated organism containing many kinds of cell and exhibiting a much greater complexity of behaviour. The human encyclopaedia is not used, on average, much more often than the bacterial book, perhaps – but it contains far more reference material tucked away, to be ready for any new situation which may arise.

(*The Thread of Life*, Bell, 1966, p.102)

Opposite this passage is a drawing of two rather bewildered little scientists standing beside the 46 huge volumes of this encyclopaedia which tower above them. But I don't think the two little scientists (who consult the DNA code-book in the picture) answer adequately the question of why *every* human cell needs all those forty-six huge volumes! It is true that they make every human cell unlike any cell in any other species; but a fuller Truth must lie in the conception that this is *Nature's* encyclopaedia, not man's. On the cell-earth analogy, that encyclopaedia represents an up-to-date record of the more successful researches of the Great Laboratory till now – it is Nature's technical reference library for evolution. As Kendrew said:

Not so long after the earth had cooled we find the first appearance of life, and preceding it presumably, this mysterious object, the self-replicating molecule of DNA. It seems such a big jump from the simple molecules which were there before, and nobody has any real idea how it happened, though there have been speculations in plenty.

(*ibid*, p.109)

Whether or not the species *Homo sapiens*, as we see him today, continues to use so small a part of his endowment and this for all the wrong purposes, there are plenty of instructions contained in that encyclopaedia for the future production of a better race of men, but that is not our worry! Each of us can see in this analogy of the *Book of Life* a 'circular process (of thought) which "comes to be" again and again', not in India and in Athens only, but in the intuition, too, of that Hebrew psalmist:

I will praise Thee, for I am fearfully and wonderfully made; marvellous are Thy works; and that my Soul knoweth full well.

My substance was not hid from Thee when I was made in secret, and curiously wrought in the lowest parts of the earth.

Thine eyes did see my substance, yet being imperfect; and in Thy Book were all my members written, being continuously fashioned before they come into existence.

(*Psalms* 139:14-16)

Here again, Repetition in Eternity!

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