

14 March 1966

READING 7

INTRODUCTION

The time has come when we should reevaluate parts of our System in the light of recent pronouncements by the more advanced physicists and others who are doing a re-think on fundamental questions. In doing this we shall find it extremely helpful to use the precise language of our System to answer questions arising from the general Truths given us by the Shankaracharya and our increasing experiences on the way to Self-realization – experience, for instance, of the chariot, the horses, the charioteer and the King or Owner.

PART 1

We begin with our Ray of Creation which, as you remember, gives us a symbolic expression of the true Principles of Relativity and Scale in looking at the Universe and the Drama of Creation. You will see (Figure 1, p.23) that, proceeding in a *downward* direction from the Creator or Absolute along our particular ray through our Galaxy, Solar System, the earth on which we live and its single satellite the Moon, we are proceeding in the direction of increasing rigidity, predictability and loss of freedom. Only in the Absolute where the Three Forces are One and undivided, and in the next world where the Three Forces have not yet attained the rigidity of Laws, do we meet with complete freedom and *unpredictability*. In the forty years or so since we first saw this picture, the scientific world has travelled a long journey, and now its more advanced thinkers have come back again to a viewpoint that has much in common with their predecessors at the end of last century.

Thus the French physicist, Costa de Beauregard (a pupil of Prince Louis de Broglie and esteemed among a select circle of physicists), has published a second book, *The Second Principle of the Science of Time*, and has explained his point of view in a recent interview (*Realités*, March 1966) in which he raises ‘some fundamental and disturbing questions like “*Why do we see time as being irreversible?*”’ To use one of his images,

We can compare the Universe to a book in which everything is already written. However, to understand what is in this book, I have to turn the pages *in a certain direction*. And the direction is determined by the decline in physical energy, as it is defined in Carnot’s Principle, the second principle of thermodynamics. This states that all mechanical activity and all physico-chemical change is accompanied by an irretrievable expenditure of energy... Evolution therefore appears to us as an irreversible process of loss of energy. This is the phenomenon of the increase of entropy...

the full implications of which have never yet been appreciated. It is, however, exactly expressed by the downward arrow placed alongside this picture of the Ray of Creation. The particular point I want to make at this moment is that the whole of Science in all its branches can only measure, devise experiments and evolve its theories in this one direction, the downward pointing arrow. It is impossible for the scientist to proceed in the opposite (the upward) direction and to picture a causal universe. The great French mathematician, Poincaré, once said that such a Universe would

be devoid of laws; really what is meant (according to Beauregard) is that no prediction would be possible – only *retrodiction* (to start from the present and reconstitute the most probable past, with very little chance of success!) For instance, we see now a swarm of asteroids which we attribute to the break-up of some planet between Mars and Jupiter; but it would be impossible to prove this scientifically, any more than, having once put a drop of ink into a glass of water, we could go back to the position where the water was clear and the ink was a separate drop!

But, asks Beauregard, is there no evidence that this upward direction does exist in the world? He quotes Bergson's statement:

All our analyses show that *life struggles to reascend the slope down which matter is moving...*
(*Creative Evolution*, 1907)

and says that when he himself turns his back on the physics books in his library and looks out of his window at the animate world of plants, animals and human beings, he sees that,

... the animate world is irrevocably moving towards more and more improbable and differentiated stages. The cetacea, for instance, (marine mammals like whales and dolphins) have had one of the most incredible life histories. They are mammals, which means that they began by emerging from the sea and adapting themselves to life on dry land, especially as regards their breathing apparatus. Then they went back into the water and adapted the mammalian pulmonary system to the conditions of their aquatic existence instead of regressing to fish-like gills. Such an evolution is entirely contrary to the laws governing Carnot's universe.

Again, he is searching (though not so clearly) for the way in which Consciousness and Mind fit into the material universe, and suggests:

... that the fundamental differences between Western Science and Eastern Wisdom may lie in the fact that the former makes systematic use of observation, whereas the latter has perhaps more extensive practical knowledge of action... in the deeper sense of *knowledge and control of the mechanism of our individual beings*.

We can have more to say about this, so let us turn again to our System.

PART 2

We are told that between every two notes of the big Octave of the Ray of Creation, there exist inner octaves. By describing three such inner octaves between just four points of the universe, the System simplifies all that vast complication bringing it within our mental grasp, and also reduces it to a correct perspective suitable to our viewpoint as we live on the earth. Figure 2 (p.24) gives us twelve definable 'states of matter' – the entire range of matter needed for study of our Spiritual, mental and physical experience. But it also differentiates in the same way the downward direction of Carnot's Principle taken by all scientific measurements and speculations from a possible upward and opposite direction.

As an example, we can first take the hint given to us about 'animate beings' by Bergson and by Beauregard. The lowest octave from 'Earth to Moon' contains all matter regarded by us as 'inanimate'. With the *D₀* at Earth begin those recently discovered biochemical mechanisms, centring on the replication of DNA, which underly protein synthesis. In another diagram of the System, Carbon 192 is described as 'enzymes' – which are organic catalysts of protein nature, local, specific and short-acting. Perhaps at the level 96 would be those more complicated

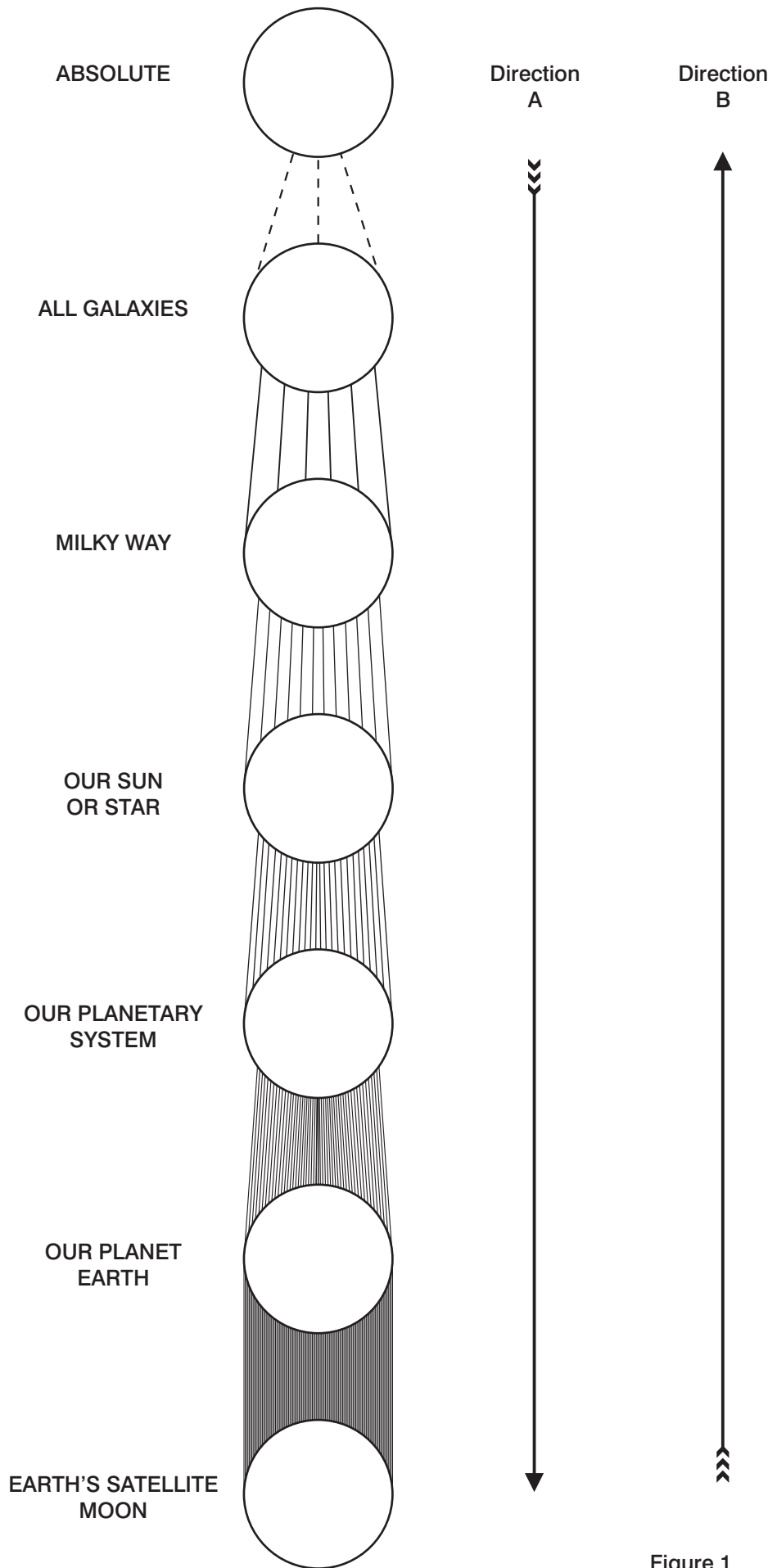


Figure 1

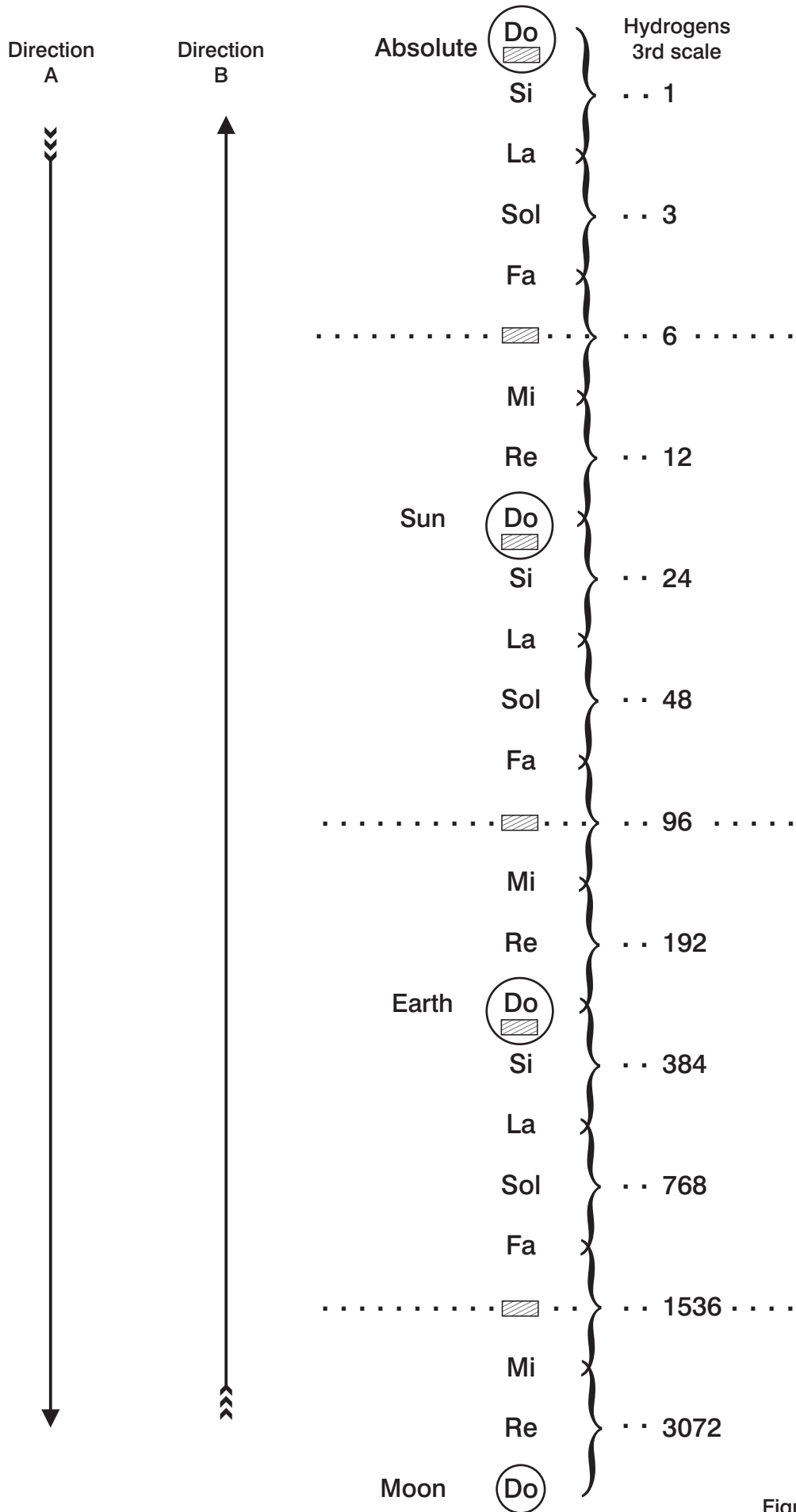


Figure 2

proteins, which we call hormones, stored in the endocrine glands which can produce profound changes via the bloodstream simultaneously in all parts of the body and are now known to produce changes in the genetic constitution of all body cells. It seems significant that the mechanism of DNA and its mutations appears to be the same throughout the organic world from man to the tiny T4 virus, which Nobel prizewinners, Watson and Crick, took for study. This virus 'comes to life' when its tail attaches itself to a particular bacillus, and injects part of its own DNA which then takes command over the DNA of the bacillus, which normally produces a thousand million exact replicas of itself in a suitable medium within a few hours.

The next state of matter (Hydrogen 48) can be studied electrically, and into this category comes all the information gained by electrical recording from sensory end-organs, nerves and nervous centres, as well as the newer computer techniques which have taught us about self-governing electronic circuits and feedback mechanisms. But to quote again from Beaugard:

Cybernetics has shown us that the acquiring of information is always paid for by an increase in entropy, and a loss of utilisable energy. This is a major discovery, because hitherto it was thought that the acquisition of information cost nothing.

So from Hydrogen 48 ('unconscious impressions') downwards these states of matter can be studied to a useful extent by scientific methods in a predictable direction.

But now, the next three higher states of matter (24, 12 and 6) cannot be inferred from the probabilities inherent in the scientific method. They are *increasingly improbable* states of matter to be known only by Conscious experience or transmitted as 'True Knowledge' by those who have fully experienced.

To return now to the possible meaning of the two arrows, Direction A (downwards) and Direction B (upwards), scientific opinion today seems to be in a first-class muddle, since some refer to the evolutionary process as A, and others imply that it is against the stream in Direction B; while still others deny that there is any difference in the two directions at all. Possibly the reason for this muddle lies in the lack of right *information*, which can only be derived from efforts in Self-realization. It is possible, for instance, through the meditation to see that the upward direction of the arrow lies in the direction of *stillness*, coming out of all activity of the machine. With the gradual evolution of the meditation in the individual, the Higher states of matter become more and more easily distinguished. It is this clear distinction between the two directions which is so essential in the true evolution of the individual, just as a child cannot be taught anything until it knows its right hand from its left.

When enough individuals have acquired an infallible sense of direction in their own psychology, it will be possible for them to be sure of direction on a larger scale. For instance, they would know whether or not this Work is continuing its upwards direction or tending to turn back towards increasing mechanicalness, useless activity and predictability; and then perhaps to see clearly these opposing processes in the great Creation of the Universe, and therefore in the vexed question about the evolution of organic life on earth.

To sum up: The 'exact sciences' study only the downward direction (A); our System and the Shankaracharya's refer only to the upward direction (B); to bring those two into harmony, Self-realization is needed in practice.

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