

July 1961

READING 7a**PART 2 (To be read on some separate occasion.)**

For all those who are interested in the study of Cosmoses, we should like to make available the most recent contribution by Mr Lucas. Others among us are collecting some fascinating recent discoveries about the Atomic world in connection with the diagram of Time and Magnitude, and we shall be studying the way to link these discoveries with the following account:

THE RELATION BETWEEN THINGS**7. THE ATOM**

1. Changes in the structure of molecules are chemical changes; changes in the structure of atoms are alchemical – that is to say, chemical processes are concerned with the arrangement of atoms within each molecule, but to transmute one element into another, to change mercury into gold, something has to be changed in the structure of the atom itself.

2. The lifetime of the molecule is of the order of a few seconds; the lifetime of the atom must be infinitely less – perhaps only a thousandth, or a ten-thousandth of a second. So the difference between chemistry and alchemy is a cosmic difference – it is a matter of different times.

3. But what is alchemy? Where and how does it occur? The answer is simple enough – it occurs in the sun. The energy of the sun depends on the building up of atoms of helium from atoms of hydrogen, i.e. on changes in the structure of the atom.

4. The fact that alchemy occurs in the sun, and that it depends at the same time on changes in the structure of the atom, gives us the clue we were looking for – alchemy belongs to a certain energy level, and energy levels, as we know, depend on the ratio between the time of the ‘observer’ and that of the entity observed. In this case man is the observer, the sun and the atom are the entities observed – the ratio between each is the same.

5. And the energy level is that of ‘impressions’. Impressions for man depend on the sun, and at the same time man gets impressions from atoms, or ions. So alchemy begins on the level of impressions. This does not mean that everything in connection with impressions is alchemy – it means that changes in the quality of impressions are alchemical changes.

6. But let us be quite clear – it is only because of man’s relation to the sun and the atom, in the cosmic scale, that he finds them to be connected with impressions. Another entity would obtain impressions from a different source. Nature, for instance, obtains impressions from molecules – alchemy in Nature begins with changes in the structure of the molecule – the organic molecule, with all its miraculous powers.

7. So the picture changes with each ‘observer’. And in order to understand the atom it is not enough to study it only from our point of view, we must try to see it as it exists for itself, in its own world.

8. The world of time in which the atom lives is almost unbelievably different from ours. In the period of one breath, for instance, many thousands of generations of atoms succeed one another. In such a period many different kinds of atom could come into being – could ‘evolve’, in

the same way that animals and plants are subject to evolutionary changes over periods of thousands of years. There is plenty of time for evolution, in the world of atoms, even in a few seconds!

9. That is why we cannot see atoms. If you imagine the whole of evolutionary time condensed into a few seconds, you will realise that we cannot possibly see individual atoms, we can only detect different species of atom, rather like different species of animals and plants.

10. And yet atoms really do exist. The atom is alive; it is born, lives and dies, in its own time. It exchanges energy of different kinds with other entities – it ‘eats’, ‘breathes’, receives impressions, exchanges creative energy with living beings smaller than itself; and by its own living and dying – its own repetition – it provides the physical substance of which molecules are made, it enables cells to breathe, it provides man with the energy of impressions, it gives Nature her creative power. How is it possible for the atom to do all this?

11. It is just about as difficult for us to understand the atom, in its own world of time and space, as it is to understand the sun. And when we visualise the atom as a sun, or a solar system, we get no nearer the truth, for the sun is not really like what we visualise, nor is the atom! In its own world, in its own time, the atom is not a point, nor is it a six-dimensional continuum – it is a living being, existing in a three-dimensional world. If it were not so, it would have no place in the cosmic scale.

12. But if we forget scientific theories, and just try to think of that which lies behind the outward appearance of things – of that which nobody sees, and yet is everything – perhaps in time we shall come to understand the atom. For the atom, after all, belongs to a different place in the cosmic scale from ours, and that is why it lies beyond our sight, and why at the same time it accounts for so much in our world that cannot be explained, that belongs to the miraculous. Do you feel perhaps that the one who wrote this poem, a long while ago, was after the same idea? Might it not have been written about the same thing?

I am the wind which breathes upon the sea,
 I am the wave of the ocean,
 I am the murmur of the billows,
 I am the ox of the seven combats,
 I am the vulture upon the rocks,
 I am a beam of the sun,
 I am the fairest of plants,
 I am a wild boar in valour,
 I am a salmon in the water,
 I am a lake in the plain,
 I am a word of science,
 I am the point of the lance in battle,
 I am the God who creates in the head the fire.
 Who is it who throws light into the meeting on the mountain?
 Who announces the ages of the moon?
 Who teaches the place where couches the sun?

Anon. Oxford Book of English Mystical Verse.

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