

February 1961

READING 3

NEW AND OVERSEAS GROUPS

RELATION BETWEEN MATTER AND ENERGY

INTRODUCTION

To discuss this difficult subject we must first begin to rid our minds of the usual dualistic approach. *Everything in the universe is material*, but one kind of matter is relatively more *energetic* than another. Of course we know that very well. We know that steam (composed of water molecules) is less energetic even than the slow moving electrons of a current passing along a cable, and this again less energetic than the matter conveying radio waves, and so on. But we are far from applying this concept to everything in the universe.

The System enables us to picture one unbroken scale of matter from that which carries the greatest number of vibrations in a given *time* (frequency) or in a given *space* (wave number) to matter carrying the longest, slowest vibrations. To this difference in matter the System applies the term *density* which, you will see at once, is a different use of the word from that which defines density as roughly equivalent to specific gravity. The System use of the word *density* refers to that fundamental quality of matter which gives rise to all its chemical, physical, biological, psychological and cosmic properties. Referring to the Ray of Creation, the matter of the Absolute is by definition the least dense, the most energetic matter in the universe; matter becoming progressively more dense down the Ray until in the Moon density becomes maximal and energy minimal.

To demonstrate the universality of this conception, I will ask you some questions to which you can easily add more of your own:

Which is more dense:

1. The wood of a tree-trunk or of a log?
2. An iron poker or the iron atom of a haemoglobin molecule?
3. A man or a corpse?
4. A train of thought or a collection of nerve cells?
5. A painting by Rembrandt or a copy or a photograph of that painting?
6. The Gospels or a commentary on the Gospels?
7. Tears of repentance or 'crocodile tears'?
8. Love or lust?
9. The stone of a cathedral or the stone of a prison?

(Discussion)

PART 1

Although you will perhaps agree that this is a powerful idea, you will also agree that we must have more precision of language and a measuring rod if we are to classify the different kinds of matter in the universe.

This can be most simply achieved along the following lines:

The first thing to remember is what was said about the Law of Three – that everything in the world, all manifestations of energy, all kinds of action, whether in the world or in human activity, whether internal or external, are always manifestations of three forces which exist in nature. These forces are called positive, negative and neutralising, or first, second and third... The three forces work together, but one of them predominates in each combination. At the same time, each force which is now positive can become negative or neutralising the next moment, in another triad. When three forces meet together, things happen. If they don't come together, nothing happens.

From this point of view, matter must also have certain definite differences according to which force works through it – whether it is organic or inorganic, a chemical element or a compound. When positive force passes through any kind of matter it is called Carbon. When negative force passes through it, it is called Oxygen. When neutralising force works through it, it is called Nitrogen. And when matter is taken without relation to the force that works through it, it is called Hydrogen. At first these names should be taken simply as labels. Thus the Law of Three brings relativity into our definition of matter for instead of one iron we have four irons, instead of one copper four coppers, and so on. Father, mother, son; carbon, oxygen, nitrogen. The family is hydrogen. The beginning of a new family is the son.

(*The Fourth Way*, p.189)

The relation between Force and Matter can be expressed very simply thus:

Element	Carbon	Nitrogen	Oxygen	Hydrogen	Value
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Density	1	+	2	+	3	=	6
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and as the density of matter progressively doubles:

$$(1 + 2 + 3) \times 2 = 12$$

$$(1 + 2 + 3) \times 4 = 24 \dots \text{etc.}$$

or in short, Hydrogen Value = $(1^C + 2^N + 3^O) \times 2^n$.

Next week you will be shown a simple scale for practical study of the chief kinds of matter in the universe based on this formula.

(Discussion)

PART 2

You will, of course, be asking why these chemical terms are used in this odd way. They are said to have been introduced into our System in the early 18th century soon after the isolation of these elements and the new impetus to chemistry given by the discoveries of Priestley, Cavendish and Lavoisier. Primitive though this terminology may sound today, yet you will gradually see how much there is in it. For instance, the whole of organic chemistry is based on these four elements; and if you now apply the Law of Octaves to the familiar Newlands-Mendeleieff Table of Elements in the circular form we used in Reading 1, you will find much of interest. (Figure, opposite)

I can only show you this in simple form, the angles showing the atomic numbers of the elements. To see the spiral you would plot the atomic weights along the radii. You will remember that the atomic numbers are proportional to the number of positive charges on the

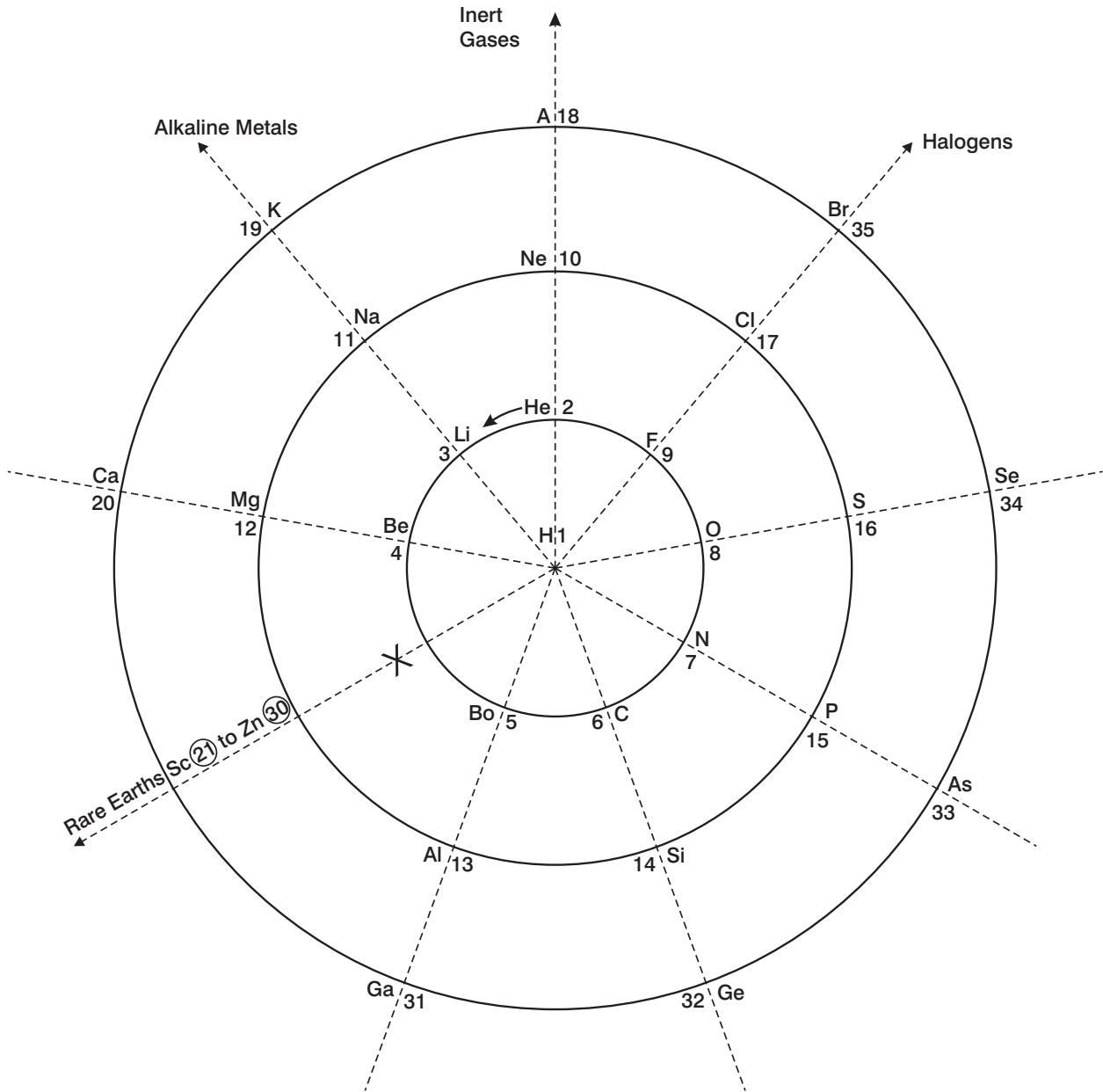


Table of Elements — 1st 3 Octaves

Note: Circles represent Quantum Shells (K, L, M, etc.).

nucleus and the number of electrons (negative charges) of successive elements; whereas the atomic weights are roughly double these numbers because of the neutrons contained in the nucleus. And then, moreover, it is the neutrons which determine the number of isotopes of each element, so that the spiral line will be a line of varying thickness.

You will note further that there is a gap (as in the Ray of Creation) at the point marked X, which in the third and subsequent Octaves is filled by 'lateral octaves' or rarer elements. You will also notice that along each radius are elements of a given family – alkaline metals, inert gases, halogens, etc. and that the Nitrogen group of elements lies at the position of the fa-mi 'interval'. The chemists among you may be able to define the significance of that.

(This circular plot is used by S. I. Tomkeieff in *A New Periodic Table of the Elements*, Chapman & Hall, Ltd., 1954).

In conclusion, (though of course much more study is required) you may agree with me that the two fundamental Laws can be equally well applied to the composition of matter as to the study of vibrations.

To remind you constantly of this wonderful Law of Three, you may care to use the prayer of St. Patrick:

I bind myself to a strong strength, to a calling on the Trinity, to a Threeness and a Oneness in the creation of the world.

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NOTE

Apart from the fact that the ordinary unscientific person may get a feeling for the beautiful symmetry and order which is to be observed when one applies the cosmic laws to the study of ordinary facts, you should not spend time worrying about the technicalities, but leave all this to the plain chemist who may find it useful in his researches. We can advance better by finding examples of the Law of Three Forces in our everyday experiences.

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PART 3. PRACTICAL STUDY OF THE TWO COSMIC LAWS

The Law of Octaves determines how things inevitably happen. Any initial impetus begins to create opposition and dies away. After long search you come across new Knowledge which enables you to find answers to important questions, gives you fresh hopes. You start in with enthusiasm; the freshness begins to go, difficulties and criticisms begin to arise. Important to remember that this is not your fault; it is inevitable. But the people who are giving you the Knowledge have to know what steps to take to provide a fresh impetus *before* deterioration sets in. Well, suppose they decide that what you need is a practical method whereby you can realize for yourselves the truth of what is told you at meetings. If they give you the right method at the right moment, again you will practise it with enthusiasm and get results for a time. But again, inevitably, you will slacken off and difficulties will arise. Again, a new impetus, but a *different* impetus this time, must be prepared for you. This is one of the reasons why it is about as rare and difficult for anyone to realise their full potentiality without a School as it is for one man alone to reach the top of Everest or get to the South Pole.

The Law of Octaves makes everything go in pulsations; in cycles; nothing ever proceeds smoothly and regularly. It is responsible for the *Principle of the discontinuity of vibrations*, which is true on every scale – in astronomy, in biology, in human affairs, in chemistry and atomic physics. So, first of all, it is necessary to find as many clear examples of this Law as you can so as to understand the *way things have to happen*.

(Pause for Discussion)

But the solution of all problems, the knowledge of how to manipulate events, how to get the particular results you want, is given by understanding of the other Cosmic Law – the *Law of Three Forces*. Again you need to know a little theory, but understanding will come from precise observation and good, clear examples. A short and vivid picture of a well remembered situation

with a clear view of the two opposing forces is required before one can attempt to find what it was which acted as the third, or harmonising, force on that occasion. We will try to give you a few tonight to help you to go on finding your own:

1. I am told that when two business men want to do a deal, it's quite fatal to jump straight to the point. Their interests conflict; they have to establish some relationship first; a third or harmonising force is needed. So they meet for lunch or have a drink together and, for a time, talk about anything else in the world but the deal in hand.
2. The same thing happens when someone comes to see you about joining the organisation. You spend some time finding out their background, and while you do that you are judging how they could be useful to us. Once a spark of mutual interest passes the gap, serious conversation can begin from a point of common interest and understanding.
3. Many negative emotions owe their origin to the inveterate tendency to coerce or adopt a superior or critical attitude to somebody else, somebody in one's own family, somebody one meets every day at the office. The cause of such negative emotions might be removed if, one fine day, we were to approach this person in a new way – seek *their* point of view, put ourselves in their shoes.

These examples show that to discover the Third Force in any situation, you have to see clearly the two opposing forces first. The System principle 'You cannot understand and disagree' is a great help here; for a spark of understanding is quite often the Third Force that is needed.

4. More often than not, the Third Force comes from a quite unexpected direction. My friend, Geoffrey Holme, then Editor of the *Studio* magazine, had to go to America on a long visit and had quite a lot of contraband in his luggage. He spent quite a bit of time thinking what to say to the New York customs officials, but he found himself confronting a tough looking customs officer without having solved the problem. Suddenly the man looked at the labels on his luggage and, mopping his eyes, said in a broken voice: 'Why *Geoffrey!*... That was the name of my favourite brother', chalked up his luggage, put his arm round his shoulder and led him through the barrier! Who could foretell that?
5. Travel has always furnished many examples. Mr Ouspensky used to say that if one could 'remember oneself' at the Gare du Nord in Paris, one could remember oneself anywhere; and he was at some pains to impress on his personal attendant, Ivanoff, that when they travelled together, he must remember himself there at the Gare du Nord. One time Ivanoff arrived rather late and terribly worried: 'What *was* it you told me to remember? Passports? Keys? Bottle of Burgundy? Something special there was, but I've forgotten.'

And the truth is that, though one may have quite a good memory – there is one thing one always forgets – oneself. (Big Self, not small self) And what makes it possible to see the Third Force in many tricky situations is often Self-remembering, for this enables one to see that there is indeed an unexpected way out of what appears to be an *impasse*.

6. To return to the Law of Octaves, as stated at the beginning of this Reading, you will see that no big aim could be achieved, no work could be accomplished without the practical knowledge of

the Three Forces. It was said that until a man has consciousness in Higher Centres, School Principles and Rules come in as the Third Force in all aims of the individual. Can you find any good examples of this just now?

7. The last example is one that is capable of being considered with more precision – a *chemical balance*, which it is easy to see is constructed on the principle of 3 Forces – the *Load*, the *Weight* and the *Fulcrum*. Before use the balance must be ‘set’ so that the pans hang equally – otherwise an error goes right through all the measurements. It is to be noted that the whole function of the balance depends on the fulcrum which, however, plays no active part in the opposition of the load and the weight. This is often characteristic of the Third Force and why it is invisible to us.

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