

23 May 1966

READING 3

A NEW APPROACH TO THE LAW OF THE THREE FORCES

INTRODUCTION

Towards the end of last Monday's Meeting there were three questions about the Law of the Three Forces:

Mrs.(Sybil) Drew. Did not the Shankaracharya say that when a man realises his need to look for Sattva, he is on the Way?

Mr. Bray. Doesn't that mean that it is a combination of Sattva with the other two Gunas that is important?

Mrs. Simpson. When there is excitement through an idea – a holy idea perhaps – one becomes aware that this turning into excitement is the wrong thing. How does one get back to the 'quiet place' when this happens?

These three questions are entirely on the right lines and emphasise the present need to re-assess and pull together what we have learnt about this Cosmic Law, which is the simplest and surest guide to all aspects of living. If life is a racecourse under the Law of Octaves, then it is the other Cosmic Law (the Law of Three) by which the jockeys and horses ride the course to win or lose the race. If this Law could be understood in the practical life of the West as it is understood by a few Wise Men of the East, a great transformation would take place in human life.

PART 1. ABSTRACT (Better omitted by those not trained in Physics!)

For it is quite possible to describe this Law in Western terms, particularly in relation to the 'Laws of Motion', if (like Professor Bondi in a recent series of Broadcast talks on 'Gravitation', *Listener*, January 26th, 1966 and subsequent issues) we do a rethink:

Newton's first law of motion is that a body on which no force acts moves in a straight line with constant velocity. Again this is one of these extremely abstract statements which is contrary to everybody's experience. We know that if we push a ball along, before long it will come to rest; similarly with everything else that we push: so for hundreds of years it had been thought that to be at rest was, as it were, the natural state of matter, and you always had to have an explanation, an agency that made things move if they were not at rest. For a long time people thought that was quite reasonable. But then they were troubled when they appreciated the motion of the planets and the Moon, which just keep on moving. How can this be accounted for? ... What Newton told us is to forget all the many forms of friction that reduce motion to rest, for this is merely local. In a wider framework where we do not have these forces ever present, we should think of bodies moving naturally, if I may use that word, in a straight line with constant velocity. If they so move, do not bother to look for a force; that is their natural way of moving. It is only when they deviate from this way of moving that you should ask why, and look for an agency or force that causes that kind of motion.

If the velocity is not constant, we speak of an *acceleration*, and I should make it clear here that the physicist uses 'acceleration' in a slightly different way from the way in which

one uses it every day. What we, in physics, mean by ‘acceleration’ is *any* change of velocity, whether the velocity is increased or decreased or whether it just changes its direction. A change of direction we call acceleration, just as much as a change of magnitude. A slowing down we call an acceleration (‘negative acceleration’) just as much as a speeding-up (‘positive acceleration’)...

As soon as a body does not move in a straight line with constant velocity, it must be accelerated. We ask, then, what is the agency which causes this; and this agency we always call a *force*. So if a body is not accelerated, there is no force; if it is accelerated, there must be a force. Then we can go round applying this to various cases, and we can ask what power a body has to resist being accelerated by a given force...

Consider the case of the Earth turning on its axis. If we have a particle in moderate latitude, then it will go round and round in a circle. That is to say, the particle will not be moving in a straight line with constant velocity, it will be moving in a circle. So a force must be exerted to keep it a fixed distance from the axis of rotation... This particle is subjected, it appears to us, to two forces, *centrifugal or inertial force* that tries to get it away from the axis, and *gravitational force* that pulls it towards the centre of the Earth. The centrifugal force is directly due to the fact that the particle has inertia, that is, *inertial mass*, that it wants to go in a straight line. This force is proportional to the inertial mass of the particle. But what about gravitation? What is it in the particle that gravitation gets its teeth into? Here we must remember that every force somehow gets its teeth into whatever it attracts. And if there is nothing for it to get its teeth into, it will not pull. A magnet generates magnetism in a piece of iron, and so attracts the iron. It does not do so in a piece of glass and thus it does not attract the glass. An electrical force will pull a charged body, but it will not pull an electrically completely neutral body. Similarly there must be a property of the body that gravitation gets a hold on, and this property we call its *passive gravitational mass* – this is what gets pulled.

So the force that pulls the particle down towards the centre of the earth is proportional to its passive gravitational mass. The force that pulls it away from the axis is proportional to its inertial mass.

[Note that he considers it is the *ratio* or balance between these two masses that keeps the particle in its observed position or course.]

Something that follows from the well-confirmed result of Galileo’s experimental finding that all bodies fall equally fast, is that, if we are falling, everything else falls with us; because everything falls equally fast. If I drop, everything else will drop at the same speed with me... Nowadays we can talk about this much more easily; we can talk about the astronauts circling round the earth. During their orbit the rockets are switched off; they fall freely, and everything in the spaceship is falling freely with them in the motion round the Earth that we describe as ‘free-fall’, because there is no force resisting it. Therefore there is complete weightlessness in a spaceship, so that the astronaut may have to catch a drop of soup that is freely floating about. In other words, they have abolished gravitation by falling freely; so we might think that gravitation is just a particular circumstance of our existence... But this is not so. And the reason why this is not so is because the gravitational field is non-uniform.

[Note: He is maintaining that gravitation is a universal force, but that it is often obscured by local conditions.]

This long excursion into abstract thought illustrates the kind of thinking which is needed for describing the Law of Three Forces *in general*. If we have not got this power of abstract thought nor the discipline and knowledge of the physicist, we had better avoid it! It is the product of the well-trained mind (Manas) and *it describes the interaction of two Forces only*. Questions like this, therefore, arise:

1. Is Newton's formulation of his first Law correct? Does a body on which no force acts 'move in a straight line'? This may be only true of photons from a Light Source which, in the near-vacuum of space, *do* move in straight lines in all directions at constant velocity.
2. Is 'gravitation' really a Universal Law, or is it only the supreme law of our own Solar System? Is it true of small insects, cells, molecules and atomic particles; or, at the other end of the scale, of retreating galaxies?

For there is a higher level of abstract thought (that of the awakened Buddhi) before which the conclusions of the physicist must give way. On page 451 of *A New Model of the Universe* Mr. Ouspensky gave us an example:

The hypothesis of gravitation was connected with observations of phenomena of weight and falling. According to the Newtonian legend indeed (the apple which Newton saw fall from the tree), these observations gave grounds for the building up of the whole hypothesis. It occurred to nobody that the phenomena which were explained by 'gravitation' or 'attraction' on the one hand, and the phenomena of 'weight' on the other hand, are *totally different phenomena* having nothing whatever in common. The Sun, the Moon, and the stars, which we see, are cross-sections of spirals which we do not see. These cross-sections do not fall out of the spirals because of the same principle by reason of which the cross-section of an apple cannot fall out of the apple. But the apple falls to the ground *as though aiming at the centre of the earth*, by virtue of an entirely different principle, namely the 'principle of symmetry'... The laws of symmetry, when they are established and elaborated, will occupy a very important place in the New Model of the Universe.

[At least one remarkable confirmation of this prophesy has lately appeared in the 'eight-fold symmetry of ultimate particles' and the discovery of the Omega-minus particle. On return from New York I found waiting for me a letter from Professor King giving a very clear description of this, and of a diagram showing the eight-fold symmetry which is now being freely used in physics journals, and which sheds light on how to understand our 'Enneagram'.]

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In Summary perhaps we can think of the Law of Three Forces like this: The Absolute (a universal principle, one expression of which is 'symmetry') creates the visible Universe (Maya) where everything is naturally moving at constant velocity unless accelerated by local forces. Positive acceleration is an expression of Positive or Active Force, Negative acceleration (dependent on inertial mass) an expression of Negative or Inertial Force; a third or Neutralising Force is the expression of that Universal Symmetry which balances the two.

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PART 2. PRACTICAL

The law of Three Forces being universally expressed in any event (on all levels of the Universe) which changes the *status quo*, that is, as the cause of any new development, the Three Forces are always present, but in different relative concentrations. Thus, in the simile of the chariot, the Three Forces are to be seen in the Body, or 'chariot' itself; the predominant force here being *inertia* (Tamas) in relation to the Spiritual life. The Three Forces are also to be seen in the five horses (the five centres) and it is their *activity* (Rajas) that is felt by us. But it is the Charioteer with which we are chiefly concerned; for it is the awakened Charioteer (Buddhi) who, by reflecting the True Observer (Atman), can perceive the operation of the Three Forces from moment to moment. When reflecting the Atman, the Charioteer is therefore the vehicle of the Third, unseen or Neutralizing Force (Sattva). The Atman Himself is above the Three Forces, for in Him they are all One.

How are we to begin? Approaching this strictly in a practical way, we observe the busy front part of our brains that lies behind the temple; and we train this part to be quiet whenever possible instead of active, for it is its real nature to be still and 'reflect' everything like a still pond or lake. We observe first that this part of the brain is ordinarily the seat of what His Holiness calls Ahankara 'the making (kara) of the utterance "I" (Aham) – which accompanies all psychic processes producing the misleading notion "I am hearing; I am seeing; I am rich and mighty; I am enjoying; I am about to suffer", etc., etc.' This mental activity is swinging between the two poles of activity and inertia (Rajas and Tamas); this is when the Charioteer is under the dominance of the horses and the chariot, and we can easily observe at any moment whether he is more under Rajas or Tamas.

Buddhi, on the other hand, is by nature predominantly Sattvic, for it is the faculty of awareness. The verbal root *budh* means 'to wake, to rise from sleep, to come to one's senses or regain consciousness; to perceive, to notice to recognise, to mark; to know, understand or comprehend...' Buddhi, then, (the gerund) means 'returning to consciousness, recovering from a swoon' also, presence of mind, readiness of wit, intention, purpose, design... discrimination, judgment, discernment...[†]

For this part of the brain behind the forehead is the 'cortical projection area' of that part of the great central headquarters (antero-lateral nucleus of the thalamus) which is fully developed only in man.

Buddhi comprises the totality of our emotional and intellectual possibilities... These stand in store, beyond, and as a background of our ego function. They constitute that total nature which is continually becoming conscious (i.e. manifest to our ego)... As a great reservoir of the permanent raw materials of our nature, which are continually presented to consciousness and the ego function (both from within and from without), Buddhi is manifold in its products and utterances, wonderful in its all-inclusiveness... Buddhi renders the unconscious manifest – through every kind of creative (and integrated) psychic process; and these processes are activated from within. That is why we become aware of the sum total of our nature only *a posteriori*, through its manifestations and reactions in the form of feelings, recollections, intuitions, ideas and the choices that we make through the intellect or will.[†]

([†]The quotations are from *Philosophies of India* by Heinrich Zimmer, Bollinger Series 26, Pantheon Books, New York, pp. 319–321)

And the way to the full functioning of this Buddhi, the Charioteer, is by observation of the Three Gunas which determine this functioning. We can now turn back to the three questions quoted at the beginning of this paper, and think about them in relation to our own observations. For we don't have to think about the Law of Three Forces *in general*, but can observe the Forces in particular examples. His Holiness's talks are full of those:

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In relation to Self-realization, he speaks about the Law of Three and relates it to the Three Gunas... He says Sattva is the natural state of man, while Tamas is the outcome of inertia. Rajas is needed to give them a push, give them impulse to go ahead, to move towards Sattva. But fortunately or unfortunately, many people again return to inertia, very few go on to regain the natural state of Sattva. He draws examples from the process of eating food. On the one hand the food is inert, the action of eating the food (and the enzymes which digest it) are Rajas, the products of the digested food are, in health, Sattva.

To which we can add:

'But the effects of eating can be different. If it is a balanced and well-regulated diet it gives a good effect, leading to energy, comfort and good health, which we could say is Sattva. If it is too hot or too spicy and if eaten in a state of excitement or hurry, it can lead to acidity and ulceration of the stomach (Rajas); while if it is excessive, too rich and too heavy, it will clog the organism leading to heaviness and sleepiness, when its action could be compared with Tamas.'

[**N.B.** It makes for clarity if we speak in general of the 'Three Forces', and reserve the term 'Gunas' for those forces which can be directly observed by the Charioteer as affecting himself.]

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