

Transactions of the Headquarters Lodge

Esoteric Hints on Cycles

Some days ago it was brought to my attention that a comment had been made by a new member of the T. S., to the effect that he could not easily understand from whom came our sacred rules of calculating cycles and time-periods, as for instance, the well-known and very difficult time-periods used by the Brahmanas of India, and which are likewise ours.

So intricate is what I have to say that I hesitate, and yet will do my best. Intricate because of the manifold ramifications into which Nature herself runs or is divided; although her heart is simple, and the rules upon which these very ancient calculations are based are likewise simple.

KEY-NUMBERS OF THE SOLAR SYSTEM

These calculations upon which the Theosophical seer or prophet, as the ancients would have called him, may see the future if he is skilled and clever enough to do so, are not arbitrary. They were invented by nobody. They are based on Nature herself, and mostly on cosmical movements, specifically those of the planets. Here is the key which I will now give you, and attempt to explain in some detail. The secret numbers of these Hindu Yugas, which have puzzled the brains especially of so many mathematical Theosophists, lie in a combination of the year of Saturn and the year of Jupiter expressed in Earth-years. There is your key.

The mistake constantly has been made by Theosophists of attempting to divide these numbers of the yugas by 7, and that is not possible, because the number 7 does not go into any of these key-numbers without leaving a remainder. 7 is the key-note of our Earth; 10 of the solar system, and 12 of our Galaxy, which of course includes our solar system, and the latter includes our Earth.

The key-numbers are these: The year of Jupiter expressed in Earth-years is approximately 12, i.e., 12 of our years make one year of the planet Jupiter. The Saturn-year expressed in Earth-years, or our years, is approximately 30. There are your two key-numbers: 12 and 30. Multiply these by each other, you have 360. $30 \times 12 = 360$.

I want to call your attention to one important fact of Nature, suspected by the most intuitive astronomers, but none as yet has succeeded in proving his intuition. It is that our solar system is an organic entity, an organism, in other words an individual, as much an organism as is a man's body. All the planets of the solar system, with the sun and our moon and other moons, are enmeshed as it were, forming a celestial machine so that they move in rhythmical or harmonic sequences. It is obvious that if this were not so, there would be no sympathy and no symphony, no harmony, in the movements of the bodies of our solar system; but these bodies would be moving helter skelter, hither and yon; and we know perfectly well that they are not.

Our Theosophical mathematicians who have not yet been given this key have all been thrown off the track because of the fact that while the years of every one of the planets of the solar system clearly prove that all these planets move synchronously together, as if they were enmeshed, wheels in a machine, yet the orbit of every one of these planets is not a multiple of some other lower orbital revolution or year. There is always a discrepancy. The year of Jupiter, for instance, is 11.86 of our Earth-years, not quite 12. The year of Mars is not exactly two Earth-years, but 1.88.

Now here is what I want to point out: It is these fractions putting the orbital times of the planets off any exact accordance with each other, which is a proof of the theory; because this shows that while all the planets are enmeshed together as it were, working synchronously and harmonically as a machine does with wheels interlocked, yet each planet itself is an individual, and has a certain liberty of movement. Keeping in mind this essential liberty or freedom we can more clearly grasp the following points: first, that the solar system is an animate organism guided by intelligence; and yet, second, that each one of the planets, although working together with all the others in harmonic rhythms and in co-ordinate times, has just a little movement of its own, as it were edging each year a little farther on; so that as time goes on, the pattern of the planets changes; and this introduces the varied fortunes and destinies not only of mankind and of the inhabitants of the other planets, but also brings about the karmic changes and modifications of the solar system. I weigh heavily on this point, because it is most important.

I want to call your attention to a few facts to show you what I mean about the rhythms, to prove that all the planets by their annual orbital motions – in other words the lengths of the planetary years expressed in Earth-years – are organically connected together.

Let us take the Year of Jupiter: Jupiter-year = 12 Earth-years approximately. Now mark: the Planet Mercury in one Jupiter-year has 48 of its own years, approximately, of course. 48 is 4×12 . You get your 12 coming in here again. You remember that I spoke of the key-numbers as being 12 and 30 – or 6, if you like.*

[*“In all the old Sanskrit works – Vedic and Tantrik – you find the number 6 mentioned more often than the 7 – this last figure, the central point being implied, for it is the germ of the six and their matrix.” – *The Mahatma Letters*, p. 345.]

Now Venus has 20 years (approximately) to one Jupiter-year. This 20 is not divisible by 12, but if you will take a longer cycle, say the cycle of 360 (18 x 20) years, then 12 goes into that 30 times, doesn't it? Yes. Note that 18 equals 12 + 6 or half of 36, which is 3 x 12, and 36 is 1/10 of 360. I want you to see how these key-figures keep coming back, coming back. Every calculation you make in these interlocked planetary movements is divisible by 6 or 12, or 60 or 30 as factors.

The Earth of course has 12 of its years while Jupiter has one. The year of Saturn is 30 of our years. Now 12 goes into 30 2½ times. But that is not a very good figure, and we therefore see on working the thing out that we must take the larger cycle which includes both the Saturn-year and the Jupiter-year. This is the famous 60-year cycle known all over China, Mongolia, Tibet, Asia - all of Asia and of ancient Europe. What is this 60-year cycle? 5 years of Jupiter expressed in Earth-years. 5 x 12 is 60. Saturn-year, being 30 of our years, goes into 60 twice. So we then see that Jupiter makes 5 of its years while Saturn is making 2 of its years. The proportion or relation is 5 to 2, i. e., both enter 60 without leaving a remainder.

THE IMPORTANT 5040 CYCLE

Now then, we come to "a very difficult point," as some of our friends are always saying! The ancients in my judgment knew of the planets Uranus and Neptune, but they did not include them in their astronomical works. We Theosophists know why. It would be extremely interesting, but it would take me a week to explain this why. I will merely add that all these astronomical ages – which is what these Hindu yugas are – all these astronomical cycles and key-figures, are based on the calculated key-numbers of Jupiter and Saturn, 12 and 30, as factors. Yet a very interesting fact comes forth. How many Jupiter-years does the planet Uranus contain? I mean, one year of Uranus comprehends or includes how many Jupiter-years? 7, practically exactly. How many Jupiter-years does the planet Neptune contain, in other words one Neptune-year? 14 Jupiter-years. If you are following these thoughts carefully, the conviction will grow upon you that the periodic times of all the planets are time-connected, connected by time-periods; and my own conviction is, although I never have had time to work this thing out, that some Theosophical mathematical 'sharp' could go ahead and even find that the planets Uranus and Neptune would be included in still larger time-cycles.

One of the most important cycles mentioned even by Plato in his Dialog called *The Laws* is 5040 years. This figure is remarkable for several features, amongst which is that it is divisible by 58 different divisors among which are the key-numbers I have been speaking of this evening, to wit 5, 6, 12, 30, 60, and of course 36, 72, and 360; but what is noteworthy about this cycle of 5040 is that it is likewise divisible by 7, giving us the quotient 720 – in which we see the key-number 72 again, x 10.

Furthermore, this figure of 5040 is arrived at by multiplying by each other the simple arithmetical series of the first seven digits taken in order, to wit: $1 \times 2 \times 3 \times 4 \times 5 \times 6 \times 7 = 5040$. This remarkable number or cycle, so specifically mentioned by Plato in another connexion, was of course known to the ancient astronomers, astrologers, and mathematicians; and by using this figure or cycle, we find that the year-period of every planet, whether the 7 sacred planets known to the ancients, or those including the others supposedly unknown to the ancients, to wit, Uranus, Neptune and Pluto, used as a divisor will divide into 5040 without remainder. In other words, 5040 is a cycle which contains the planetary years of all the planets in the solar system, and thus links them up through having as one of its factors the number 7 – a most interesting fact, and one worthy of study.

THE FAMOUS BABYLONIAN CYCLE

I wish to call your attention once more to this 60. Remember that it is 5 times the Jupiter-year, Jupiter-year being 12 of our years, and two times the Saturn-year, the Saturn-year being 30 of our years, approximately. It is 1/10 of the Babylonian Neros of 600 years; and take the square of 60 and you will have the famous Chaldean or Babylonian Saros, 3,600 years. This cycle of 60 years is of course the root-figure of the famous so-called Babylonian sexagesimal method of reckoning, to wit reckoning by 60s; but as we know from Berosus, as he is called by certain Greek writers who have written about him and who have left us fragments of these Chaldean writings, the sexagesimal system of reckoning or of counting was an integral part of the same system that we know to have been common in Hindusthan since immemorial time. Berosus in the fragments left to us likewise informs us that the famous Hindu Yuga-figures, based on 4 3 2, were likewise as well known in Babylonia as in India. The sexagesimal root-figure of 60 is of course a factor of 4320 with various ciphers added according to the length of the cycle. One of the commonest time-periods known in Chinese writings is the mention of the cycle of 60 years: so many cycles of 60 years, and so-and-so lived and taught.

In connexion with the number 5, I would also remind you that the Latin lustrum was a period of 5 years observed by the Roman State and held very sacred indeed. They also knew of the cycle of 60 years, i. e., one Jupiter year times five.

Furthermore, in India, the cycle of 60 years is constantly used in mathematical, astronomical, astrological and other computations, as they also use 6 and 12.

When you look into these matters, the facts are so numerous, so scattered all over the face of the earth, and among all races of people and in all times, that finally as you study you are brought to the conviction that what we Theosophists teach is true, that there was once a Wisdom-Religion of mankind which was universal over the earth.

THE CIRCLE OF 360°

It is from Babylonia, but originally from India, that we of the West got our manner of dividing the circle into 360° – each degree consisting of 60', the latter of 60". Does anyone know the reason why the Babylonians chose the number 360? Why didn't they choose some other number? I will tell you: The number 360 arises from, an old Theosophical teaching of the ancient God-Wisdom of mankind, to the effect that the true number of days in a year is 360, the cycle of the seasons. But as the ages passed, and due to the fact that the Earth is an individual with a will of its own, it does things at times, not exactly disobeying the mandates of the system in which it is enmeshed, not disobeying Father-Sun as the Lord and King of his realm, but determined, as are the other planets, to move a little on its own. So that as the ages pass along – taking the mean of 360 days in a year – the daily rotation of the Earth (making the day and night) quickens a little bit for a while, and the days become 361, and then 362, in a year, and then 363, 364, and now at the present time our year consists of 365 days and a fraction, 1/4. Then this libration returns to the normal 360 days in a year; and then the Earth slows down its rotational period, so that for ages – how many ages is a question that does not enter into the picture here – any one of our Earth-years is less than 360 days: 359, 358, 357, 356, until it reaches the end of that libratory cycle. Then it begins to swing back; and thus the Earth continues to follow this libration.

That is why the Babylonian initiates, getting their ancient wisdom originally from India, divided the circle into 360 points or degrees; because in their Temple-crypts and Initiation-chambers they were taught that the true Earth-year consists of 360 units or days – and it actually does. Thus the circle became adopted in mathematics as divided into 360 points, cogs, degrees – call them what you like. It is a wheel, a wheel of time, which actually applies to the Earth.

DAWNS AND TWILIGHTS

But notice how the Earth-year divided into days is enmeshed again with the other planetary cycles: Jupiter-year 12 of our years, Saturn-year 30 of our years. 30×12 is 360. Marvelous that the number of days in our year is exactly the same as the Saturn-year and the Jupiter-year multiplied by each other. You know in the Jewish Bible there is a passage saying: "The days of our years are threescore years and ten" – 70. Well, actually this is an Oriental way – Jews were Orientals – of using a round figure for 72. You know how they make 72 out of 60, which is 5 Jupiter-years and two Saturn-years? What is 1/10 of 60? 6. Put down 6 for the Dawn, another 1/10 for the Twilight: $6 + 60 + 6 = 72$. In the same way you will see in the Table that there is a Dawn and a Twilight for every cosmic period; and the dawn and the twilight are in all cases of relative equal length, and in all cases are 1/10 of the cycle period. 1/10 of 4000 is 400 – the Dawn; 1/10 of 4000 is 400 – the Twilight. In the Treta-Yuga there are 3000 *Divine* Years, please, not our Solar years: 1/10 of 3000 is 300 – the Dawn; 1/10 of 3000 is 300 – the Twilight. The next is Dwapara-Yuga. It is 2000 Divine Years; 1/10 of that is 200; 1/10 of 2000 again is 200 – the Twilight. And so for the last of the yugas, the Kali-Yuga, 1000 Divine Years in length; 1/10 of it, 100 the Dawn; another 1/10 – 100, the Twilight. A shorter way, of course, is to take 2/10 or 1/5 to find the combined length of the Dawn and Twilight.

YUGAS – DIVINE YEARS – SOLAR YEARS

Dawn – 400 – 144,000

Krita-Yuga – 4000 – 1,440,000

Twilight – 400 – 144,000

----- 4800 – 1,728,000

Dawn – 300 – 108,000

Treta-Yuga – 3000 – 1,080,000

Twilight – 300 – 108,000

----- 3600 – 1,296,000

Dawn – 200 – 72,000

Dwapara-Yuga – 2000 – 720,000

Twilight – 200 – 72,000

----- 2400 – 864,000

Dawn – 100 – 36,000

Kali-Yuga – 1000 – 360,000

Twilight – 100 – 36,000

----- 1200 – 432,000

DIVINE YEARS: 12,000; SOLAR YEARS: 4,320,000

OTHER INTERESTING FACTORS

Now a further interesting thing about this 72: a human being is a child of the Universe, and being its child, its laws are his. Its life is his. Its pulsations are his. The rhythmic periods in Nature must therefore work through man. One of the greatest rhythmic pulsations in man is the pulse-beat. Do you know what the average pulse-beat for a human being is? 72. 72 beats of the human pulse every minute, or if you like, it is 60 pulse-beats plus the increment of beginning plus the increment of lapsing into the next pulse-beat. 60 plus 12; $5 \times 12 + 12$. You see how these numbers recur? 72 is twice 36. Well, now you remember 360 there, and 36 is 6×6 . You notice how the numbers thus keep coming, whatever you do. 6 goes 12 times into 72 human pulse-beats in a minute. 6×12 is 72.

Here is a very interesting factor. In enumerating the years of the different planets I intentionally did not speak of the Moon, for your minds are so enwrapped with the astronomical teachings of the West in which the Moon is not considered a true planet, that I did not want to confuse you. Yet so thoroughly does Nature work throughout, after the same laws, the same rhythms, the same principles, the same pulsing, that do you realize that what the astronomers call the minor Saros, that is the eclipse-cycles, the cycle of years in which the eclipses begin again and repeat themselves nearly as they were before, is 18 years and some 10 or 11 days? We can here drop the days. 18 years: 6×3 , 12 plus 6, $\frac{1}{2}$ of 36. I want to call your attention to these key-figures, which keep coming to the fore. Furthermore, this is not all. Do you know how many is the average number of eclipses in this minor Saros of 18 years – Solar eclipses and the eclipses of the moon? The average number is 72.

Here is a very interesting fact. The sun-spots, according to modern astronomy, come, or the maximum is reached, every 11 years, and a fraction, 11 and $\frac{1}{3}$ or something like that. But here again we must allow for librations; and taking everything together, all factors included, and the way the Solar System has all its bodies enmeshed together like the cogs of wheels, yet each having a little independent movement of its own, which in time changes the pattern – a very interesting fact is that the sunspots coincide with the perihelion of Jupiter. Now explain that if you like. In other words, Jupiter like all the other planets makes its annual tour or orbit of revolution around the sun, completing it in 12 of our years. But in doing so at one point of its orbit it is closer to the sun, closer than it is at any other point of its orbit. That is what they call perihelion, close to the sun. When the perihelion of Jupiter takes place, the sun-spots reach their maximum, roughly every 12 years, between 11 and 12 years. And it is a remarkable thing – I would wager almost anything upon it – that if we could collect the statistical data we would find that outbreaks of disease and other afflictions of mankind will coincide with these 12-year periods, sun-spot maxima or minima. I saw a calculation of that kind some time ago in which it was shown that epidemics of spinal meningitis broke out at every sun-spot maximum. In other words when the planet Jupiter was closest to the sun, every 12 years or so.

Do you know in modern Western astrology it has been customary to speak of the planet Jupiter as the great benefic, and the planet Saturn as the great malefic. But I think that this is pretty near to being nonsense. I will give you one instance showing how this idea is a distortion of facts. I read some time ago a very interesting statistical discovery made by a French writer who showed that whenever the planet Jupiter was in its nodes as the astronomer phrases it, crimes of violence increased enormously. Whenever the planet Saturn was in its nodes, crimes of violence were noticeably few. Now that is easily explained. Jupiter excites, urges people to do and to move. Saturn calms, brings balance and steadiness, the truth being that every planet has its good side and its bad, every planet can be a benefic or a malefic, according to its action. This is true astrology, and all that we have been talking about is true archaic astrology or Theosophical astrology.

THE DIVINE YEAR AND THE YUGAS

I want to call your attention to the Table again: a Divine year is the name given according to this system of archaic calculating of time-periods to 360 of our years or Solar years. Therefore 12,000 Divine years in Solar years are 4,320,000. Made up thus: the Krita-Yuga of 4000 Divine years – 1,440,000 Solar years, with the Dawn and Twilight thereof – a Krita-Yuga is 1,728,000, (and

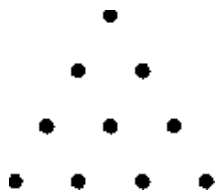
isn't 1728 the cube of 12?). The Treta-Yuga is 3000 Divine years. Multiply this by 360 to turn it into our ordinary Solar years, and you get 1,080,000 years. Add on the 2110, the Dawn and Twilight, and you get 1,296,000 years.

Here in the Table you get this series of 144, (the square of 12). Isn't it in *Revelation* of the Christian New Testament that it is said that the sealed unto the Lord, or the saved, shall be 144,000 in number? You see here again the mystical figure, 144, that is the main point. You can add and take off ciphers according to the time-period or cycle you are discussing. It is the head of the series of figures that is important – 144. The square of 12, twice 72, 4 x 36, and so forth. So we go down to the Dwapara-Yuga: turn it into Solar Years, with a Dawn and a Twilight, and you have 864,000; then Kali-Yuga, the age we are in now called the Iron Age, adding to it its 2/10 for Dawn and Twilight, you have 432,000 years. This system, or mathematical calculation of adding an opening and a closing of every age-period or cycle which the Hindus call the Dawn and Twilight, is an extremely archaic method of calculating based on Nature herself, for she always introduces everything she does with a preparatory period, whether of time or phenomena, or both, or whatever you may be dealing with. All diseases come with the Dawn of preparation. Then there is the disease. Then there is the Twilight of the disease as it fades out. So to get the full time-period of the cycle you must know not only the length of the cycle itself, but its Dawn and its Twilight, its beginning and its end.

You see, Companions, there are just simply so many sides to a study like this, you could go on interminably talking just as long as your recollection will bring back to you facts which you have garnered from Nature.

THE PYTHAGOREAN TETRAKTYS

I want to point out to you what is called the Pythagorean Tetraktys. It was so holy amongst the ancient Pythagoreans that they swore oaths by it, and a Pythagorean would no more violate an oath sworn by the Holy Tetraktys than he would – it was an oath that simply could not be violated. Why did they think it so holy? They gave the answer: because it adds up to 10. It was 4 plus 3 plus 2 plus 1 = 10. What is 1/10 of 10? 1. Add 1 as a Dawn; add another 1/10 of 10 as a Twilight, and you will have 12. They sometimes figured the Pythagorean Tetraktys as thus, one sphere, then two spheres, then three spheres, then four spheres.



1 + 2 = 3, + 3 = 6, + 4 = 10. Don't you see the Pythagorean Tetraktys, 4, 3, 2, 1, in the Yugas in their numerical order of the cycles? The same figures, the same system of counting, the same fundamental idea. No wonder the Pythagorean philosopher swore by the Holy Tetraktys, because it was equivalent to saying, "I swear by Holy Zeus," as if he had said, "Father and Lord of Life, of whom my own life is a spark, truth of truth, and life of life, real of real," – it was an oath that no Pythagorean ever dared to violate. It was like swearing by one's own Higher Self.

OTHER CYCLES

Now, here is another thought. Have you been examining the night-sky for the last year or so? If so, you will have noticed that the planets Saturn and Jupiter have been in near conjunction for some time, and will soon begin to separate. [March, 1941] It was the conjunction of Jupiter and Saturn which the ancients taught always began notable changes and events on our earth. (Elsewhere in the solar system too, but we are more naturally interested in what is taking place on our Earth.) Just when such a happening will come again, with the other planets as now they are, i. e., as they will be on May 11th, of this year 1941, would require intricate calculations. It may be thousands and thousands of years before the planets all return to the positions they *now* hold in the sky; but the two planets, Saturn and Jupiter, because 5 years of Jupiter equal 2 years of Saturn, will be, so far as those two planets are concerned, again passing each other in conjunction, near the same place, in 60 years: 5 years of Jupiter = 2 of Saturn: think it over, do not forget these key-numbers.

There are almost innumerable cycles of varying lengths, and of greatly differing importance, which were known to the ancients as well as to the few moderns acquainted with esoteric chronology and cyclical computation. As for instance, there is the well-known astronomical cycle called the Precessional Cycle of 25,920 years, divisible by many if not all of the factors or keys already alluded to, and which in its influence on the destiny of mankind is one of the most important.

Then, there is the so-called great Orphic Cycle of 120,000 years, which of course is obviously 1/3 of the still greater and immensely important cycle, because dealing with racial periods, to wit, 360,000.

THE KEY-NUMBER 72

With reference to the key-number 72, which itself of course is a cycle of varying length depending upon the ciphers added to it, the following series contains cycles, every item of which on the list is important and well worthy of study by those interested in chronological or cyclical matters: 72 x 10 = 720

$$720 \times 2 = 1440$$

$$720 \times 3 = 2160$$

– an extremely important cycle this because entering into the computations of the precessional cycle mentioned above, for there are 12 such cycles of 2160 in the Precessional Cycle of 25,920.

$$720 \times 4 = 2880$$

$$720 \times 5 = 3600$$

– a cycle well known to historians and chronologers as the famous Babylonian Saros, which again multiplied by 100 or 102 equals the racial cycle mentioned above of 360,000.

$$720 \times 6 = 4320$$

– again a most famous cyclical key -number, well known in ancient Hindusthan and in Babylonia and in the esoteric or occult schools of virtually all Asia and ancient Europe, a cycle which with zeros added is an even more important human racial cycle than is the 360,000 above mentioned.

$$720 \times 7 = 5040$$

– another extremely useful, interesting, and important cyclical period, with or without extra ciphers to define shorter or longer periods, and mentioned even by Plato in his *Laws*, as already stated.

The ancient initiate-astrologer-astronomers rarely failed in their prophecies, for it was a relatively perfect knowledge of the interrelations of planetary movements and of other cosmic time-periods, both great and small, which enabled them to predict with an accuracy of Nature herself events which they knew would take place because of their knowledge of what had taken place in other preceding cycles of time; and all cycles are repetitive, bringing more or less the same train of events or sequences as happened before, when these cycles begin anew. It should be noted that this is in no sense fatalism; for every cycle, although repeating itself constantly in time, due to what modern astronomy calls the irregularities in planetary and other celestial movements, is never precisely or exactly what the preceding cycle was; for every such cycle beginning anew its course always differs in less or greater degree from its former courses.