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A brief essay upon the nature and the significance of the MAGICAL ALPHABET.

The Book 777 has for its primary object the construction of a magical alphabet.

One of the greatest difficulties experienced by the student - a difficulty which increases rather than diminishes with his advance in knowledge - is this: he finds it impossible to gain any clear idea of the meanings of the terms which he employs. Every philosopher has his own private meaning, even for such universally used terms as "soul"; and in most cases he does not so much as suspect that other writers use the term under a different connotation. Even technical writers, and those who take the trouble to define their terms before using them, are too often at variance with each other. The diversity is very great in the case of this word "soul" for example. It is sometimes used to mean Atman, an impersonal principle almost synonymous with the Absolute, itself a word which has been defined with scores of different senses. Others use it to mean the personal, individual soul as distinguished from the over-soul or God. Others take it as equivalent to Neshamah, the Understanding, the intelligible essence of man, his aspiration; yet others mean the Nephesch, the animal soul, the consciousness corresponding to the senses. It has even been identified with the Ruach, which is really the mechanism of the mind. Apart from these major distinctions there are literally hundreds of minor shades of meaning. We find therefore a writer predicating the soul as A, B, and C, while his fellow student protests vehemently that it is none of these things: despite which the two men may be in substantial agreement.

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For there immediately arises the question of the relations of one term to the others. There have been few attempts at constructing a coherent system; and those that are coherent are not comprehended.

In view of this Euroclydon of misunderstanding it is clearly necessary to establish a fundamental language. (I saw this fact in my twenties.) My extended travels throughout the world had brought me into contact with religions and philosophical thinkers of every shade of opinion: and the more I knew the greater became the confusion. I understood with bitter approval the outburst of the aged Fichte: 'If I had my life to live again, the first thing I would do would be to invent an entirely new system of symbols whereby to convey my ideas!' As a matter of fact certain people, notably Raimond Lully, have attempted this great work.

I discussed the question with Bhikkhu Ananda Metteya in 1904. He professed himself completely satisfied with the Buddhist terminology. I could not concur with this opinion. Firstly, the actual words are barbarously long, impossibly so for the average European. Secondly, an understanding of the system demands complete acquiescence in the Buddhist doctrines. Thirdly, the meaning of the terms is not, as my venerable colleague maintained, as clear and comprehensive as could be wished. There is much pedantry, much confusion and much disputed matter. Fourthly, the terminology is exclusively psychological. It takes no account of extra-Buddhistic ideas; and it bears little relation to the general order of the universe. It might be supplemented by Hindu terminology. But to do that would immediately introduce elements of controversy. We should at once be lost in endless discussions as to whether Nibbana was Nirvana or not: and so on for ever.

The system of the Qabalah is superficially open to this last objection. But its real basis is perfectly sound. We can easily

discard the dogmatic interpretation of the Rabbins. We can refer everything in the Universe to the system of pure number whose symbols will be intelligible to all rational minds in an identical sense. And the relations between these symbols are fixed by nature. There is no particular point - for most arbitrary purposes - in discussing whether 49 is or is not the square of 7.

Such was the nature of the considerations that led me to adopt the Tree of Life as the basis of the magical alphabet. The 10 numbers and the 22 letters of the Hebrew alphabet, with their traditional and rational correspondences (taking into consideration their numerical and geometrical interrelations) afford us a coherent systematic groundwork sufficiently rigid for our foundation and sufficiently elastic for our superstructure.

But we must not suppose that we know anything of the Tree a priori. We must not work towards any other type of central Truth than the nature of these symbols in themselves. The object of our work must be in fact to discover the nature and powers of each symbol. We must clothe the mathematical nakedness of each prime idea with a many-coloured garment of correspondences with every department of thought.

Our first task is thus to consider what we are to mean by the word number. I have dealt with this in my commentary to Verse 4, chapter I of the 'Book of the Law'. "Every number is infinite; there is no difference."*

The student should go very thoroughly into the question of transfinite number. Let him consult the Introduction to Mathematical Philosophy of the Hon. Bertrand Russell in a reverent but critical spirit. In particular, in the light of my notes on number, the whole conception of Aleph Zero should give him a fairly clear idea of the essential paradoxes of the magical interpretations of

* See Appendix to this Essay. Afterwards read again carefully the above preliminary remarks.

the idea of number, and especially of the equation 0 = 2 which I have devised to explain the universe, and to harmonise the antinomies which it presents to us at every turn.

Our present state of understanding is far from perfect. It is evidently impossible to obtain a clear notion of each of the primes, if only because their sum is Aleph Zero.

The numbers 0 to 10, as forming the basis of the decimal system, may be considered as a microcosm of aleph Zero. For they are endless, 10 representing the return to Unity, by the reintroduction of Zero to continue the series in a manner progressively complex, each term representing not only itself in its relations with its neighbours, but the combination of two or more numbers of the first decad. That is, until we reach numbers whose factors are all (except unity) greater than 10; as 143 (= 11 x 13). But this necessity to consider such numbers as altogether beyond the first decad is only apparent; each prime being itself an elaboration in some sense or another of one or more of the original 0 to 10 series. (Thus 13 is a "middle modulus", and 111 the "great modulus", of Unity. That is, the multiples of 13 and 111 explain the coefficients of their scales in terms of a more specialized idea of Unity. E. g. 26 = 2 x 13 represents the Dyad in a more specially connotated sense than 2 does; 888 describes the function of 8 in terms of the full meaning of 111, which is itself an elaborate account of the nature of Unity, including (for instance) the dogmatic mmmcptimax mystery of the equation 3 = 1.

By repercussion, again, each later correlative of any number of 0 to 10 expresses an extended idea of that number which must immediately be included in the fundamental conception thereof. For instance, having discovered that 120 = $\lfloor 5$ we must henceforth always think of

and not very important parts of fixed stars.

* This, at least, may be regarded as conventionally true for our immediate purpose of study. A number such as 3299 x 3367 x 3319 may be regarded as a distant

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5 as the root of those ideas which we find in 120, as well as using our previous ideas of 5 as the key of our investigation of 120.

On the surface, it would appear that this mode of working could only lead to baffling contradictions and inextricable confusion; but to the mind naturally lucid and well trained to discrimination this misfortune does not occur. On the contrary, practice (which makes perfect) enables one to grasp intelligently and class coherently a far vaster congeries of facts than could possibly be assimilated by the most laborious feats of memorizing. Herbert Spencer has well explained the psychology of apprehension. The excellence of any mind, considered merely as a storehouse of information, may be guaged by its faculty of re-presenting any series required facts to itself by systematic classification into groups and sub-groups.

This present attempt at a magical alphabet is, in fact, a projection, both intensive and extensive, of this system to infinity. On the one hand, all possible ideas are referred by progressive integrations to the pure numbers 0 to 10, and thence to 2, 1, and 0. On the other, the connotations of 0, 1, and 2 are extended, by progressive definitions, to include every conceivable idea on every plane of the Universe.

We are now in a position to consider the practical application of these ideas. As regards the numbers 0 to 10 of the key-scale ~~0 to 10~~, each one is a fundamental idea of a positive entity. Its nature is defined by the correspondences assigned to it in the various columns. Thus we may say that the God Hanuman, the Jackal, the Opal, Storax, Truthfulness and so on are all qualities inherent in the idea called 8.

With regard to the numbers 11 to 32 of the key-scale ~~11 to 32~~, they are not numbers at all in our sense of the word. They have been arbitrarily assigned to the 22 paths by the compiler of the Sepher Yetzirah

There is not even any kind of harmony: nothing could be much further from the idea of 29 than the Sign of Pisces. The basic idea had better been considered the letter of the Hebrew Alphabet, and the ~~of their~~ correspondence of each, with fairly comprehensive definitions such as the Tarot trumps is very close and necessary. (It will be noticed that certain Alphabets, especially the Coptic, have more than 22 letters. These additional symbols fill up the Tree of Life by attributing them to the Sephiroth.) The numerical value of the letters does however represent a real and important relation. But these numbers are not quite the same as the original sephirotic numbers. For instance, although Beth equals 2, equals ♀, and ♀ is part of the idea of Chokmah = 2, the one 2 is not identical with the other. For ♀ in itself is not a Sephira. It is not a positive emanation in necessary sequence in the scale 0 to 10. For Beth is the path which joins Kether and Binah, 1 and 3. Zayin = 7 is the path joining Binah, 3, and Tiphereth, 6. That is, they are not numbers in themselves, but expressions of relations between numbers according to a predetermined geometrical pattern.

Another class of number is of immense importance. It is the series usually expressed in Roman numerals which is printed on the Tarot trumps. Here, with two exceptions, the number is invariably one less than that of the letters of the alphabet where they are numbered according to their natural order from 1 to 22. Thus Gimel, the third letter, pertains to the trump № III, Mem, the thirteenth letter, to № XII. These numbers are very nearly of the same order of idea as those of the numerical value of the letters; but they represent rather the active magical energy of the number than its essential being.

To return to the pure Sephirotic number, the number 0, 1, 2, 3, 5, and 7 are primes, the others combinations of these primes. Here we

have already the principle of equilibrium between the single and the complex. At the same time there is an inherent virtue in these compound numbers as such which makes it improper to think of them as merely combinations from their mathematical elements. Six is an idea in itself, a "Ding an sich". The fact that 6 = 2 x 3 is only one of its properties. Similar remarks apply to the numbers above 10, but here the importance of the primes as compared to that of the compound numbers is much greater. Few compound numbers ~~is right~~ appear in the present state of our knowledge in themselves as distinguished from the value of their mathematical elements. We may however instance 93, 111, 120, 210, 418, 666. But every prime is the expression of a quite definite idea. For instance 19 is the general feminine glyph, 31 the highest feminine trinity, a great modulus of Zero. 41 is the aspect of the feminine as vampire force. 47 as dynamic and spasmodic, 53 as hedonogenous, 59 as claiming its complements, and so on.

Each such number retains its peculiar significance in its multiples. Thus the number 23, a glyph of life, exhibits the life of the Dyad in 46, etc. The significance of the primes has been carefully worked out, with fair accuracy in each case, up to 97. Above 100 only a few primes have been thoroughly investigated. This is because, (by our present methods) such numbers can only be studied through their multiples. That is to say, if we wish to determine the nature of the number 17 we shall examine the series 34, 51, 68 etc. to see what words and ideas correspond to them. We shall establish a ratio 51 : 34 = 3 : 2. From our knowledge of 3 and 2 we can compare the effect produced upon them by the modulus 17. For instance, 82 is the number of the Angel of Venus, and means a thing beloved; 123 means war, a plague, pleasure, violation; and 164 has the idea of cleaving, also of profane as opposed to sacred. The common element in these ideas

is a dangerous fascination; whence we say that 41, the Highest Common Factor, is the Vampire.

But the above considerations, which would extend the letters of the magical alphabet to an infinity of symbols, are not properly pertinent to this essay. Our main object is convenience in communicating ideas. And this would be violated if we aimed too high. We can attain all our objectives for all practical purposes by confining ourselves to the traditionally accepted scale of the 32 paths of 10 numbers and 22 letters. The only extension necessary is the inclusion of the three Veils of the Negative, a matter of fundamental importance in the apodeictic structure of the Tree given in the structural diagram. These Veils are useful in only a very few positive lists.

The numbers 31 and 32 must be duplicated because the letter Shin possesses two very distinct main branches of idea, one connected with the element of Fire, and the other with that of Spirit. Also, the letter Tau is referred both to the Planet Saturn and the element Earth. This is a great defect to the scheme theoretically. But the traditional attributions are so numerous and well defined that no remedy seems feasible. (In practice no serious trouble of any kind is caused by the theoretical confusion.)

One further difficulty has arisen owing to the discovery of the planets Neptune and Uranus. We have however tried to turn this into an advantage by including them with Primum Mobile in a Saphirotic arrangement of the planets. And the device has justified itself by enabling us to construct a perfectly symmetrical attribution for the rulings and exaltations of the Signs of the Zodiac.

For the rest it need only be said, that, as in the case of most lines of study, the key to success is the familiarity conferred by daily practice.

Appendix: what is a number? a symbol?

DIGEST A. [The Book of the Law I. 4, defines the word 'number'.

It may clarify the subject if we venture to paraphrase the text. The statement "Every number is infinite" is, on the face of it, a contradiction in terms. But that is only because of the accepted idea of a number as not being a thing in itself, but merely a term in a series homologous in character. All orthodox mathematical argument is based on definitions involving this conception. For example, it is fundamental to admit the identity of 2 plus 1 with 1 plus 2. The Book of the Law presents an altogether different conception of the nature of number.

Mathematical ideas involve what is called a continuum, which is, superficially at least, of a different character to the physical continuum. For instance, in the physical continuum, the eye can distinguish between the length of a one-inch stick and a two-inch stick, but not between those which measure respectively one thousand miles and one thousand miles and one inch, though the difference in each case is equally an inch. The inch difference is either perceptible or not perceptible, according to the conditions. Similarly, the eye can distinguish either the one-inch stick or the two-inch stick from one of one inch and a half. But we cannot continue this process indefinitely - we can always reach a point where the extremes are distinguishable from each other, but their mean from neither of the extremes. Thus, in the physical continuum, if we have three terms; A, B, and C, A appears equal to B, and B to C, yet C appears greater than A. Our reason tells us that this conclusion is an absurdity; that we have been deceived by the grossness of our perceptions. It is useless for us to invent instruments which increase the accuracy of our observations, for though they enable us to distinguish between the three terms of our series, and so restore the theoretical Hierarchy, we can always continue the process of division until we

original diagram annexed by A.C. published as Appendix 2

Th. 777 Revised

arrive at another series: $A^{\frac{1}{2}}$, $B^{\frac{1}{2}}$, $C^{\frac{1}{2}}$. where $A^{\frac{1}{2}}$ and $C^{\frac{1}{2}}$ are distinguishable from each other, but where neither is distinguishable from $B^{\frac{1}{2}}$.

On the above grounds, modern thinkers have endeavoured to create a distinction between the mathematical and the physical continua; yet it should surely be obvious that the defect in our organs of sense, which is responsible for the difficulty, shows that our method of observation debars us from appreciating the true nature of things by this method of observation.

However, in the case of the mathematical continuum, its character is such that we can continue indefinitely the process of division between any two mathematical expressions soever, without interfering in any way with the regularity of the process, or creating a condition in which two terms become indistinguishable from each other. The mathematical continuum, moreover, is not merely a question of series of integral numbers, but of other types of numbers, which, like integers, express relation between existing ideas, yet are not measurable in terms of that series. Such numbers are themselves parts of a continuum of their own, which interpenetrates the series of integers without touching it, at least necessarily.

For example; the tangents of angles made by the separation of two lines from coincidence to perpendicularity, increases constantly from zero to infinity. But the only integral value is found at the angle of 45 °, where it is unity.

It may be said that there is an infinite number of such series, each possessing the same property of infinite divisibility. The ninety tangents of angles differing by one degree between zero and ninety may be multiplied sixtyfold by taking the minute instead of the degree as the coefficient of the progression, and these again sixtyfold by introducing the second to divide the minute. So on ad infinitum

All these considerations depend upon the assumption that every number is no more than a statement of relation. The new conception, indicated by the Book of the Law, is of course in no way contradictory of the orthodox view; but it adds to it in the most practically important manner. A statistician computing the birth-rate of the ~~eighteenth~~ last century is makes no special mention of the birth of Napoleon. This does not invalidate his results; but it demonstrates how exceedingly limited in their scope even with regard to their object for the birth of Napoleon had more influence on the death-rate (and so of the birth-rate) than any other phenomena included in his calculations.

A short digression is necessary. There may be some who are still unaware of the fact, but the mathematical and physical sciences are in no sense concerned with absolute truth, but only with the relations between observed phenomena and the observer. The statement that the acceleration of falling bodies is thirty-two feet per second, is only the roughest of approximations at the best. In the first place it applies to earth. As most people know, in the Moon the rate is only one-sixth as great. But, even on earth, it differs in a marked manner between the poles and the equator, and not only so, but it is affected by so small a matter as the neighbourhood of a mountain.

It is similarly inaccurate to speak of "repeating" an experiment. The exact conditions never recur. One cannot boil water twice over. The water is not the same, and the observer is not the same. When a man says that he is sitting still, he forgets that he is whirling through space with vertiginous rapidity.

It is possibly such considerations that led earlier thinkers to admit that there was no expectation of finding truth in anything but mathematics, and they rashly supposed that the apparent ineluctability of her laws constituted a guarantee of their coherence with

truth. But mathematics is entirely a matter of convention, no less so than the rules of Chess or Baccarat. When we say that "two straight lines cannot enclose a space", we mean no more than that we are unable to think of them as doing so. The truth of the statement depends, consequently, on that of the hypothesis that our minds bear witness to truth. Yet the insane man may be unable to think that he is not the victim of mysterious persecution. We find that no reason for believing him. It is useless to reply that mathematical truths receive universal consent, because they do not. It is a matter of elaborate and tedious training to persuade even the few people whom we teach of the simplest theorems in Geometry. There are very few people living who are convinced - or even aware - of the more recondite results of analysis. It is no reply to this criticism to say that all men can be convinced if they are sufficiently trained, for who is to guarantee that such training does not warp the mind?

But when we have brushed away these preliminary objections, we find that the nature of the statement itself is not, and cannot be, more than a statement of correspondences between our ideas. In the example chosen, we have five ideas: those of duality, of straightness, of a line, of enclosing, and of space. None of these are more than ideas. Each one is meaningless until it is defined as corresponding in a certain manner to certain other ideas. We cannot define any word soever, except by identifying it with two or more equally undefined words. To define it by a single word would evidently constitute tautology.

We are thus forced to the conclusion that all investigation may be stigmatized as obscurum per obscurius. Logically, our position is even worse. We define A as BC, where B is DE, and C is FG. Not only does the process increase the number of our unknown quantities in

Geometrical progression at every step, but we must ultimately arrive at a point where the definition of Z involves the term A. Not only is all argument confined within a vicious circle, but so is the definition of the terms on which any argument must be based.

It might be supposed that the above chain of reasoning made all conclusions impossible. But this is only true when we investigate the ultimate validity of our propositions. We can rely on water boiling at 100° Centigrade +), although, for mathematical accuracy, water never boils twice running at precisely the same temperature, and although, logically, the term water is an incomprehensible mystery.

To return to our so-called axioms: Two straight lines cannot enclose a space. It has been one of the most important discoveries of modern mathematics, that this statement, even if we assume the definition of the various terms employed, is strictly relative, not absolute; and that common sense is impotent to confirm it as in the case of the boiling water. For Bolyai, Lobatschewsky, and Riemann have shown conclusively that a consistent system of Geometry can be erected on any arbitrary axiom soever. If one chooses to assume that the sum of the interior angles of a triangle is either greater than or less than two right angles, instead of equal to them, we can construct two new systems of Geometry, each perfectly consistent with itself, and we possess no means soever for deciding which of the three represents truth.

I may illustrate this point by a simple analogy. We are accustomed to assert that we go from France to China, a form of expression which assumes that those countries are stationary, while we are mobile. But the fact might be equally well expressed by saying that France

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+) In revising this Comment, I note with amusement that it had escaped me that 100° C. is by definition the temperature at which water boils! I have seen it boil at about 84° C. on the Baltoro Glacier, and determined my height above sea-level by observing the boiling-point so often that I had quite forgotten the original conditions of Celsius.

left us and China came to us. In either case there is no implication of absolute motion, for the course of the earth through space is not taken into account. We implicitly refer to a standard of repose which, in point of fact, we know not to exist. When I say that the chair in which I am sitting has remained stationary for the last hour, I mean only stationary in respect to myself and the house. In reality, the earth's rotation has carried it over one thousand miles, and the earth's course some seventy thousand miles from its previous position. All that we can expect of any statement is that it should be coherent with regard to a series of assumptions which we know perfectly well to be false and arbitrary.

It is commonly imagined, by those who have not examined the nature of the evidence, that our experience furnishes a criterion by which we may determine which of the possible symbolic representations of Nature is the true one. They suppose that Euclidian Geometry is in conformity with Nature because the actual measurements of the interior angles of a triangle tell us that their sum is in fact equal to two right angles, just as Euclid tells us that theoretical considerations declare to be the case. They forget that the instruments which we use for our measurements are themselves conceived of as in conformity with the principles of Euclidian Geometry. In other words, they measure ten yards with a piece of wood about which they really know nothing but that its length is one-tenth of the ten yards in question.

The fallacy should be obvious. The most ordinary reflection should make it clear that our results depend upon all sorts of conditions. If we inquire, "What is the length of the thread of quicksilver in a thermometer?", we can only reply that it depends on the temperature of the instrument. In fact, we judge temperature by the difference

of the coefficients of expansion due to heat of the two substances, glass and mercury.

Again, the divisions of the scale of the thermometer depend upon the temperature of boiling water, which is not a fixed thing. It depends on the pressure of the earth's atmosphere, which varies (according to time and place) to the extent of over twenty per cent. Most people who talk of "Scientific accuracy" are quite ignorant of elementary facts of this kind.

It will be said, however, that having defined a yard as the length of a certain bar deposited in the Mint in London, under given conditions of temperature and pressure, we are at least in a position to measure the length of other objects by comparison, directly or indirectly, with that standard. In a rough and ready way that is more or less correct. But if it should occur that the length of things in general were halved or doubled, we could not possibly be aware of the fact. The same considerations apply to all the other so-called laws of Nature. We have no means soever of determining even so simple a matter as to whether one of two events happens before or after the other.

Let us take an instance. It is well known that the light of the Sun requires some eight minutes to reach the Earth. Simultaneous +) phenomena in the two bodies would therefore appear to be separated in time to that extent; and, from a mathematical standpoint, the same discrepancy theoretically exists, even if we suppose the two bodies in question to be only a few yards one more remote than the other. Recent consideration of these facts has shown the impossibility of determining the fact of priority, so that it may be just as reasonable

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+) Simultaneity, closely considered, possesses no meaning soever. See A. S. EDDINGTON, "Space, Time, and Gravitation" p. 51.

to assert that a dagger-thrust is caused by a wound as vice versâ. Lewis Carroll has an amusing parable to this effect in "Through the Looking-Glass", which work, by the way, with its predecessor, is packed with examples of philosophical paradox. +)

We may now return to our text, "Every number is infinite." The fact that every number is a term in a mathematical continuum is no more an adequate definition than if we were to describe a picture as a Number So-and-So in the catalogue. Every number is a thing in itself ++), possessing an infinite number of properties peculiar to itself.

Let us consider, for a moment, the numbers 8 and 9. 8 is the number of cubes measuring one inch each way in a cube which measures two inches each way; while 9 is the number of squares measuring one inch each way in a square measuring three inches each way. There is a sort of reciprocal correspondence between them in this respect.

By adding one to eight we obtain nine, so that we might define unity as that which has the property of transforming a three-dimensional expansion of two into a two- dimensional expansion of three. But

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+) If I strike a billiard-ball, and it moves, both my will and its motion have causes long antecedent to the act. I may consider both my work and its reaction as twin effects of the eternal Universe. The moved arm and ball are part of a state of the Cosmos which resulted necessarily from its momentarily previous state, and so, back for ever.

Thus my Magical Work is only one of the cause-effects necessarily concomitant with the cause-effects which set the ball in motion. I may therefore regard the act of striking as a cause-effect of my original Will to move the ball, though necessarily previous to its motion. But the case of magical Work is not quite analogous. For I am such that I am compelled to perform Magick in order to make my Will to prevail; so that the cause of my doing the Work is also the cause of the ball's motion, and therefore is no reason, why one should precede the other. See Book 4, Part III for a full discussion.

/Since writing the above, I have been introduced to "Space, Time and Gravitation" where similar arguments are adduced./

++) I regret to find myself in disagreement with the Hon. Bertrand Russell with regard to the conception of the nature of Number.

if we add unity to nine, unity appears as that which has the power of transforming the two-dimensional expansion of three aforesaid into a mere oblong measuring 5 by 2. Unity thus appears as in possession of two totally different properties. Are we then to conclude that it is not the same unity? How are we to describe unity, how know it? Only by experiment can we discover the nature of its action on any given number. In certain minor respects, this action exhibits regularity. We know, for example, that it uniformly transforms an odd number into an even one, and vice versâ; but that is practically the limit of what we can predict as to its action.

We can go further, and state that any number soever possesses this infinite variety of powers to transform any other number, even by the primitive process of addition. We observe also how the manipulation of any two numbers can be arranged so that the result is incommensurable with either, or even so that ideas are created of a character totally incompatible with our original conception of numbers as a series of positive integers. We obtain unreal and irrational expressions, ideas of a wholly different order, by a very simple juxtaposition of such apparently comprehensible and commonplace entities as integers.

There is only one conclusion to be drawn from these various considerations. It is that the nature of every number is a thing peculiar to itself, a thing inscrutable and infinite, a thing inexpressible, even if we could understand it.

In other words, a number is a soul, in the proper sense of the term, an unique and necessary element in the totality of existence.

We may now turn to the second phrase of the text: "there is no difference". It must strike the student immediately that this is, on the face of it, a point blank contradiction of all that has been said

above. What have we done but insist upon the essential difference between any two numbers, and show that even their sequential relation is little more than arbitrary, being indeed rather a convenient way of regarding them for the purpose of coordinating them with our understanding than anything else? On a similar principle, we number public vehicles or telephones without implication even of necessary sequence. The appellation denotes nothing beyond membership of a certain class of objects, and is indeed expressly chosen to avoid being entangled in considerations of any characteristics of the individual so designated except that cursory designation.

When it is said that there is no difference between numbers (for in this sense I think we must understand the phrase), we must examine the meaning of the word 'difference'. Difference is the denial of identity in the first place; but the word is not properly applied to discriminate between objects which have no similarity. One does not ask, "What is the difference between a yard and a minute?" in practical life. We do not ask the difference between two things of the same kind. The Book of the Law is trying to emphasize the doctrine that each number is unique and absolute. Its relations with other numbers are therefore in the nature of illusion. They are the forms of presentation under which we perceive their semblances; and it is to the last degree important to realize that these semblances only indicate the nature of the realities behind them in the same way in which the degrees on a thermometric scale indicate heat. It is quite unphilosophical to say that 50 degrees Centigrade is hotter than 40 degrees. Degrees of temperature are simply conventions invented by ourselves to describe physical states of a totally different order; and, while the heat of a body may be regarded as an inherent property of its own, our measure of that heat in no way concerns it.

We use instruments of science to inform us of the nature of the various objects which we wish to study, but our observations never reveal the thing as it is in itself. They only enable us to compare unfamiliar with familiar experiences. The use of an instrument necessarily implies the imposition of alien conventions. To take the simplest example: when we say that we see a thing, we only mean that our consciousness is modified by its existence according to a particular arrangement of lenses and other optical instruments, which exist in our eyes and not in the object perceived. So also, the fact that the sum of 2 and 1 is 3, affords us but a single statement of relations symptomatic of the presentation to us of those numbers.

We have, therefore, no means soever of determining the difference between any two numbers, except in respect of a particular and very limited relation. Furthermore, in view of the infinity of every number, it seems not unlikely that the apparent differences observed by us would tend to disappear with the disappearance of the arbitrary conditions which we attach to them to facilitate, as we think, our examination. We may also observe that each number, being absolute, is the centre of its universe, so that all other numbers, so far as they are related to it, are its appanages. Each number, is therefore the totality of the Universe, and there cannot be any difference between one infinite universe and another. The triangle ABC may look very different from the standpoints of A, B, and C respectively; each view is true, absolutely; yet it is the same triangle.

The above interpretation of the text is of a revolutionary character, from the point of view of science and mathematics. Investigation on the lines here laid down will lead to the solution of those grave problems which have so long baffled the greatest minds of the world, on account of the initial error of attacking them on lines which involve self-contradiction. The attempt to discover the

nature of things by a study of the relations between them is precisely parallel with the ambition to obtain a finite value of π . Nobody wishes to deny the practical value of the limited investigations which have so long preoccupied the human mind. But it is only quite recently that even the best thinkers have begun to recognize that their work was only significant within a certain order. It will soon be admitted on all hands that the study of the nature of things in themselves is a work for which the human reason is incompetent; for the nature of reason is such that it must always formulate itself in proportions which merely assert a positive or negative relation between a subject and a predicate. Men will thus be led to the development of a faculty, superior to reason, whose apprehension is independent of the hieroglyphic representations of which reason so vainly makes use. †) This then will be the foundation of the true spiritual science which is the proper tendency of the evolution of man. This science will clarify, without superseding, the old; but it will free men from the bondage of mind little by little, just as the old science has freed them from the bondage of matter.

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†) See "Eleusis" , A. Crowley Collected Works, Vol. III, Epilogue.