

## Alkesra: The Missing Mathematical Tool

Brahim Bouali

"Truth is ever to be found in the simplicity, and not in the multiplicity and confusion of things."

Isaac Newton

### I. INTRODUCTION

In order to solve the problem of planetary motion, the shape of the surface of a rotating fluid, the oblateness of the earth, the motion of a weight sliding on cycloid, and many other problems discussed in his *Principia Mathematica* (1687); Newton invented calculus or at least refined it (Pask, 2013). A good philosophical question is the following: what would Newton have done had he been alive and had been puzzled like us with mysteries such as particle duality?

To my mind, the answer is very obvious: he would have had created a new mathematical tool. Hence, the object of this paper which is to create a new math able to help us solve many seemingly unsolvable questions either in mathematics or in the natural world in general.

As a philosopher interested in mathematics I asked myself a simple question. What if we do not have the right tools? What if we are simply trying to understand a new phenomenon while using antique tools?

The word Algebra provided me with the answer. We all know that Al-Khowârizmi (aka Mahommed ibn Mousa) is considered the father of Algebra because unlike Diophantus' work, which dealt in specific examples, Al-Khowârizmi was the first algebra text to present general methods. We may also know that Algebra comes from the Arabic Noun *al-jabr* meaning "reunion of broken parts". In its most general form, algebra is the study of mathematical symbols and the rules for manipulating these symbols; it is a unifying thread of almost all of mathematics (Rashed, 2009). As an Arab speaker I always asked this simple question: *Jabruma'dha?* (Restoring what?). True, we do *Muka'bala* (balancing) between parts but we never break these parts before. If somebody follows this thread of thought he /she would realize that what is missing in mathematics is this very simple fact: we need to break things first before we attempt to balance or restore them-a very obvious fact. I opted to name this first attempt at breaking parts and going inside seemingly unbroken units by the Arab noun *Alkasr* or Alkesra (breaking of parts) if Latinized.

### II. INTRODUCTION TO ALKESRA

In algebra the absolute value of a number is its distance away from zero. The cipher or the Arab word *sifr* (zero) is a neutral integer that stands at midways between negative and positive numbers (James.B, 2001). In alkesra, the approach is completely different. How far does a number can stretch to reach the next zero? Or in better words how long does a number can stretch before it becomes two numbers in which one is a zero? Let us start with number 1. How many numbers can 1 take before it becomes two numbers or  $n+0$ . The answer is very simple- It is nine.  $1+1=2$  and  $1+1+1=3$  ETC...

In physics, the laws of plasticity state that every object in the universe can either be stretched or compressed. At a certain point any object in the universe will reach its limits of elasticity or compression. Hooke's law states that Force= $k$  times the change in distance  $x$ . After the limit point comes the point of plasticity where the object stretched reaches the point of no return to its initial point  $x$  (R. Hill, 1998). Let us suppose that we stretch 1 which may represent anything to its limit of elasticity which is 9. So, intuitively, we may refer to the distance between 9 and 10 by what physicists call plastic stage where the number or any object is no longer able to return to its previous state which is a single number. Indeed, we can add any decimal to 9 and it will become two numbers.

After the plastic stage, comes the third stage or the breaking point whereby the object/number will divide into two parts. Following this reasoning, we may intuitively expect that the breaking point of number 1 will be superior to nine and less or equal to ten.

So we will have the following number line:

0; 1; 1+1; 1+1+1; 1+1+1+1 all the way to .....; 10

The stretching absolute value of  $|1|$  is  $10-1=9$

As we see, Alkesra cogently claims that numbers have also this potential to stretch, reach their elastic potential and then break as any object

The snapping point will divide the object into two perfect halves if the forces exerted on both ends of the object are the same. For instance, 1 may stretch until it becomes 10 and joins with the next zero. When we expand 1 until it reaches its limit, Alkesra argues that number 1 has reached its breaking point and after that 1 (or 10 after stretching) will divide into two perfect halves-five on both sides. 11 for instance cannot be a breaking point since the identity of 1 has doubled.

Likewise, 10.1 is not a breaking point because the individuality of our number has tripled.

If our guess is right then we should find the same number 5 if we divide our stretched numbers twice: by 9, the number of steps our number 1 has to take to reach 10 and by 2 the number that divides ten into two perfect halves.

So let us check our hypothesis. If the absolute value of  $|1|$  is 9 then the absolute value of  $|2|$  is 18 since 2 is made out of  $1+1$  or  $9+9=18$  steps or grades to reach twenty, three is 9 by 3 which gives 27 etc...

So if we stretch all the numbers from 1 to nine, we find the following result:

$9+18+27+36+45+54+63+72+81=405$ . If we divide 405 by 9 squared we will find 5.

Notice here that nine stands for the number of steps we talked about and two stands for the gradient (2) with which we divide 10.

Another test to check the soundness of our theory is to calculate the perfect breaking points of every number and divide them by 9. Instead of calculating the nine steps we need to make in order to reach the next zero, we can just calculate the perfect results of this stretching since we intuitively agree that breaking point of any number has the next zero as a limit. Our theory argues that 1 needs nine steps to reach its potential breaking point:  $9+1=10$ . So we have 10+the potential breaking point of 2 which is  $20+30+40+50+60+70+80+90=450$  divided by 9 we find 50 and what is fifty? It is the perfect breaking point of five.

Observe that we are not dealing here with the classical notion of arithmetic sequence for the simple reason that any arithmetic sequence is open to the infinite whereas Alkesra sequence is limited in space and time.

### III. ABSOLUTE VALUE

Imagine we have a broken glass. Instead of trying to glue all the broken parts together, we just take one part and attach it to the largest part of our broken glass. The other wrecked parts are simply ignored or treated as if they did not exist. This is exactly the problem with our classical mathematical Thinking. True, mathematics as we know at the present teaches us reliable ways by which we can fix some parts of the puzzle of our universe in general especially at the macrolevel, but it also teaches us to ignore some important parts of the enigma. In reality, mathematics should be like archeology constantly digging for the different strata of knowledge. For instance, Algebra teaches us that every number has a single absolute value. However, when we break numbers, Alkesra tells us that any number has *six* absolute values that cogently describe its distance from the next zero from both ends.

Number 2, for instance, has the *stretched* absolute value of  $|18|$  or  $9+9$ , the *perfect* absolute value of  $|20|$ , an *Imperfect* value of 2 and the *precise* or *breaking* absolute value of  $|19.98|$  but also a *backward* absolute value of  $|2|$  or  $1+1$  and a *forward* absolute value of  $|16|$  or  $8+8$ . The following number line will explain these values.

0\_\_1\_ 2 backward\_\_2\_\_\_\_\_ 8 forward\_\_\_\_\_16\_\_\_\_\_18\_\_\_\_\_20

You may have noticed that in any mathematical operation, Alkesra helps us follow the order of our universe (multi-dimensional) and approximate our intuition which is four-dimensional.

With bigger numbers, the calculation of the absolute value is slightly harder if we do not pursue the following steps.

Let us take this example: 379.

First, multiply the number by 9

Second, find the initial absolute perfect value and multiply it by 10 to find the perfect absolute value.

A-give the value of 1 to the second digit and add it to the first digit.

B- Consider all other digits as zeroes

C-add those to the number found

Third, divide your number by 100

Fourth, calculate backward and forward values then multiply by 100

Finally, multiply the original number by 9.9 to find the precise absolute value.

So we have 379 multiplied by 9= 3,411

$3+1(4)=4$

$4+00=400$  (initial absolute perfect value) times 10= 4000 (perfect absolute value)

400/100=4

4=|3| backward times 100=|300|

4=|5| forward times 100= |500|

379 times 9.9= |3786.21|

So 379 have five absolute values

A perfect absolute value of |4000|

A precise absolute value of |3,786.21|

A stretched absolute value of |3411|

A backward absolute value of |300|

A foreword absolute value of |500|

If we want to know the original shape of any stretched number we just divide our number by 10 the perfect absolute value of 1. For example 6333 is 633.33. if we want to know initial perfect absolute value of any number we consider the second number as 1 and add it to the first number and consider all other numbers as zeroes. So 6.333 is 6+1 +00 which equals 700. Similarly if we want to know its final perfect absolute value, we add a zero to our number. For example: 456 is 4+1+0=50 +0= 500.

#### IV. THE SPEED OF LIGHT AND THE NOTION OF PERFECT VERSUS IMPERFECT NUMBERS

We all know that the speed of light in a vacuum, commonly denoted  $c$ , is a universal physical constant<sup>4</sup>. Its value is exactly **299 792 458** meters per second ( $\approx 3.00 \times 10^8$  m/s), or **186,282** miles per second. What matters to us here is that the speed of light is a perfect speed for two main reasons. First, the speed of light is, according to Einstein's special relativity theory, the maximum speed at which all matter and information in the universe can travel. It is the speed at which all mass less particles and changes of the associated fields (including electromagnetic radiation such as light and gravitational waves) travel in vacuum. Second, regardless of the motion of the source or the inertial frame of reference of the observer, the speed of light is always the same.

If we agree that the speed of light is perfect then our speed is not and consequently the numbers as we conceive them to calculate and describe our imperfect speed are also not perfect. The question is the following: what will happen to our numbers if we provide them with the speed of the Principle of Invariant Light Speed is described by Einstein in his preface by the following words "... light is always propagated in empty space with a definite velocity [speed]  $c$  which is independent of the state of motion of the emitting body".

light? What will happen if we put a number on a beam of light in a vacuum? In other words, in our attempt to make them perfect will they remain the same?

To do this we need alkesra rules. First we need to find the perfect absolute value of the speed of light, then its initial perfect value and then divide the number by nine.

299 792 458 is equal to

2+1 (9)+ 0= 30

The perfect absolute value of 30 is 300 (million)

The initial absolute value of the speed of light is 3 since 3 times 10 =30

Now 3 is equal to 1+1+1

So 3 divided by 9 times 3 equals 0.11

It follows therefore that if we put 1 on a beam of light it stretches to become 1.11

In other words, 1 is *imperfect* whereas 1.11 is *perfect*

2 is imperfect whereas 2.22 is perfect

3 is imperfect whereas 3.33 is perfect and so on towards infinity.

We can also find the same results if we calculate the speed of light in miles which is easier and much simpler by the way.

We have 186.282 thousand miles per second.

1+1(8)=2 +0 (6)= 20

The absolute perfect value of 20 is 200 while its initial absolute value is 2.

2 divided by 9 =0.22 divided by 2 = 0.11

As special relativity has demonstrated, only the speed of light in a perfect vacuum is the same in every coordinate system. So a single beam of light or will reach it breaking point at ten while two at twenty etc... To render the perfection of light imperfect so that we know exactly when a stream of light reaches its breaking point or precise absolute value while using our imperfect tools, we do the following simple operation.

200 (thousand) times 1.11= 222 thousand or:

300 times 1.11= 333 million

So if we stretch the speed of light to 222 thousand miles per second or 333 million meters per second light will break. I will deal with this idea thoroughly when I deal with dark matter in the next section

The following table recapitulates the precise absolute values of our nine natural numbers.

Imperfect and Perfect number value	Precise absolute value or breaking point
1=1.11	1.11 times 9= 9.99
2=2.22	2.22 times 9 = 19.98
3=3.33	3.33 times 9= 29.97
4=4.44	4.44 times 9= 39.96
5=5.55	5.55 times 9=49.95
6=6.66	6.66 times 9= 59.94
7=7.77	7.77 times 9= 69.93
8=8.88	8.88 times 9= 79.92
9= 9.99	9.99 times 9= 89.91

Notice how the identity of our imperfect numbers triples or achieves a higher accurate level.

Notice also that 9 has a direct link with 1 the last bold digit in the precise absolute value. While 2 with 8, 3 with 7, 4 with five, 5 with 5, 6 with 4, 7 with 3, 8 with 2 and 9 with 1 again to achieve a full circle.

So a number like 27 is also 83. Since two is congruent to 8 and 7 is congruent to 3 etc...

Notice also that 10, the perfect absolute value of number 1 minus 9.99, its precise absolute value, give 0.01. In other words, for every number that may represent anything in this universe, we have a limit of 0.01 that separates it from perfection. If we multiply 0.01 by 100 we get one. Keep this information in mind for I will deal with it in more detail in the section about dark matter and dark energy.

## V. NUMBER VALUES

If we are able to stretch the number to its absolute perfect value before it breaks down then we should expand our ways of calculating this number to its perfect absolute identities too. If Alkesra helps us see that the perfect absolute value of  $|1|=10$  then we should find 10 different congruent identities for a single number. In other words, Alkesra tells us that the broken glass is not made of only two parts but rather ten. Indeed, Alkesra asserts that any number has 10 identities or 10 parts of broken pieces that need to be balanced. Let us take the example of number 2.

*a-2 is congruent to 2 (imperfect absolute value)* b-2 is congruent to twenty (perfect absolute value) c- 2 is congruent to 19.98 (precise absolute value) d- 2 is congruent to 8 (the last digit in the number of the precise absolute value) e-2 is congruent to 18 (the stretched absolute value) f-2 is congruent to 1.98 or 2.02. The perfect absolute value of 1 is  $10-9.99=0.01$  and multiplied by 2 give 0.02. 2 minus or plus the value gives us the two intertwined identities.

g- 2 is congruent to 10 addition identity. Two needs two steps to reach zero backward and 8 steps to reach 10 or the next zero forward. Every number has the same value.

h-2 is congruent to 100. The perfect absolute value of 10 is  $|100|$ . Every number has the same value

l-2 is congruent to 9.99 with dark energy or a snapping energy of 100, the absolute perfect value of 10, the initial perfect value. I prefer to call this value *parachute value*. We know that at the value 19.98, 2 will break into two parts: 9.99 on each side. The breaking will cause a snapping force equal to the absolute perfect value of the initial perfect value:  $10 = 100$ . This idea will be further explored in the next sections.

m- 2 is congruent to the sum of all values of 2 which is 191.97. The reason why I did not calculate the parachute energy is that this energy is ephemeral and does not last: 100 divided by 18 or  $(9+9)=5.5$  or about 5 units and a half of time.

If we divide the overall result by 2 we find the overall value of number 1 which is 95.985. To check the soundness of our measurements we can divide the sum (95.95) by 9 and we find:

10.665.

Notice that the first digit in our result is 1, the imperfect value of our whole operation.

Let us try number five for example. 95.985 times 5 and divided by 9= 53.325. let us try number 9 or any number in fact: 95.985 times 9 and divided by 9= 93.95. So each time we multiply the overall value number 1 and divide the sum by nine we return to the value of our original number (the first digit in any sum).

Notice that by using this technique we can enter inside Planck's constant and precisely measure the quantized elements that form the quantum of light. In the next section I will deal with this idea in a more detailed manner.

Let us take the example of number 1 now and measure its overall value without relying on dividing number 2 to find its value. We will be surprised.

- 1 is congruent to 1 (imperfect absolute value)
- 1 is congruent to 10(perfect absolute value)
- 1 is congruent to 9.99(precise absolute value)
- 1 is congruent to 9(stretched value)
- 1 is congruent 9 (the last digit in 9.99)
- 1 is congruent 0.99 and 1.01
- 1 is congruent to 10 (addition identity)
- 1 is congruent to 100 (absolute perfect value of addition identity)
- 1 is congruent to 4.995 and parachute 50 (the non-stretched value is when the number actually breaks into two parts)
- 1 is congruent to the sum of all values: 155.985

If we try to calculate the sum of all values using this value, the first digit in the sum will not correspond with the number calculated. For instance let us calculate the overall value of number two: 155.985 times 2 and divided by 9= 34.6633. From all the overall values from one to nine only the value of two can give us the best approximate identity of the number divided in the first place.

Now we know that only the value of number two can give us the most accurate calculation. Notice that if we divide 95.985 by nine we get not only the first number but also the perfect absolute value of 1 which is ten: **10.665**. However we have an extra amount of 0.665 (10.665-10) that always adds to our measurement. So if we multiply 0.665 times 9 we find 5.985. The value of 1 is 95.985-5985= 90 the perfect absolute value of 9. I prefer to call the value of 5.985 the **Devil's Constant** because if we subtract the overall value of 2 (191.7) from the overall value of 1 (155.985) we get 60 and sixty divided by nine gives 6.66.

We will see later how only alkesra enables us to get inside the quantum if I borrow the term from the great Planck and how it enables us to solve many mysteries about the photon and dark matter.

**Boolean algebra, artificial intelligence and the Riemann Zeta function**

Boolean algebra, as everybody knows, is based on a simple logical binary opposition between two reverse values: true or false, zero or 1, yes or no, high and low and open or closed (Boole,2003[1854]).

Imagine you close the door of your house. There are various states that describe how the door is closed. For a thief, as a case in point, there are various levels that describe how the door is shut. Is it simply shut, or locked from inside by key. Besides the key lock is the safety chain also fastened? And finally is the lock attached to an alarm system or not? The point from this awkward thought experiment is that everybody knows intuitively that what we commonly denote as true is in fact a gradient of various forms of truths and vice versa. Alkesra is doing nothing but describing the tools that approximate our intuition. In other words, what Alkesra can offer to our state of knowledge is the expansion of our logic without breaking the rules of our innate logicity.

Thus, we can safely reason that Alkesra can easily describe five types of truth: we have imperfect truth, precise truth, perfect truth, stretched truth and non-stretched truth. Similarly, we have imperfect falsity, perfect falsity, precise falsity, stretched falsity and non-stretched falsity. The following table will summarize the various values of 0 and 1

Identities	Values of 0 (false, closed, low...)	Values of 1 (true, open, high...)
Imperfect false/true	0	1
Precisely false/true	The zero has two precise values:1.11-1= 0.11 or 10 - 9.99= 0.01	1.11
Perfect false/ true	0.20 or 0.020	10
Stretched false/true	0.01 times 9= 0.09	1.11.9= 9.99
non-stretched false/true	0.11 divided by 2=0.055	9.99 divided by 2= 4.995

As we see both 0 and 1 have various identities that are innate and not the result of a hocus pocus mathematical reasoning. I opted to only focus on five identities but in fact every number has ten identities. It will be the job of Boolean algebra experts to cater for the scope of the complexity if we want to adopt ten identities.

Reduced to its minimum, every integer {0, 1} has in fact five identities and 40 possible combinations. It follows therefore that in a simple circuit of A B we have: A={a1,a2,a3,a4,a5} and B={b1,b2,b3,b4,b5} the possible combinations are the following:

{a1b1,a1b2,a1b3,a1b4,a1b5;a2b1,a2b2,a2b3,a2b4,a2b5;a3b1,a3b2,a3b3,a3b4,a3b5;a4b1,a4b2,a4 b3,a4b4,a5b5} and if we start backward we will have another 20 combinations: {b1a1,b1a2,b1a3,b1a4;.....}

In other words, we have 40 possible combinations and one can see how Alkesra can help us cater for highly complex algorithms whether belonging to computation or robotics. It is worth noting at this juncture that all these combinations are perfectly operable in all Boolean operations (addition, multiplication and complementation)

The same impact can be easily seen on Modular arithmetic. Obviously alkesra provides an excellent development in the field of cryptology. Let us study this simple example: 2 is congruent to 3 in Mod 3. Notice that 3 can only go three steps forward or backward: 0, 1, 2 forward or 2, 1, 0 backward. With alkesra 3 can go 9 steps forward and 9 steps backward. You can imagine the degree of expansion in the malleability and flexibility of modular options.

Finally, the best proof of the validity of alkesra theory is that alkesra solves very easily the famous Riemann hypothesis. Briefly speaking, this famous unsolved mathematical problem can be summarized in the following question. For which (s) we have Zeta of (s) equal zero. The zero has to be real and of course part and parcel of the critical strip (Blazard et al, 1999). Alkesra says that at the speed of light, zero stretches to become 0.11.

Now let us solve the problem using this first precise value of zero.

$1/1^{0.11} = 1$  and 1 divided by 9 = 0.11 and  $0.11 = 0$ .

$2/2^{0.11} = 1/1^{0.11} + 1/1^{0.11} = 2$  and 2 divided by 9 times 2 or 18 = 0.11 and  $0.11 = 0$

$3/3^{0.11} = 1/1^{0.11} + 1/1^{0.11} + 1/1^{0.11} = 3$  and 3 divided by 9 times three = 0.11 = 0

As a matter of fact we can plug any number to infinity. For instance let us plug in number 367.  $367/367^{0.11} = 367/9 \text{ times } 367 = 367/3303 = 0.11 = 0$

Similarly if we use the second value of our zero = 0.01, we do the following operation.

$1/1^{0.01} = 1$  and 1 divided by 100 = 0.01 and  $0.01 = 0$  in imperfect numbers.

$2/2^{0.01} = 1$  divided by 1 to the power 0.01 + 1 divided by 1 to the power 0.01 = 2. 2 divided by (100 times 2) = 0.01 and  $0.01 = 0$

Similarly, we can plug any number

$367/367^{0.01} = 367$  divided by 367 times 100.  $367/36,700 = 0.01 = 0$

So the answer to our previous question, "for which s we have zeta of (s) equals zero", is the following: 0.11 or 0.01. In other words, alkesra informs us that these two values do in fact exist outside Riemann's famous  $\frac{1}{2}$  line.

### **Relativity, Dark matter and Dark Energy**

Imagine we send a stream of light over a magnetic field. According to the laws of relativity light will bend and make a curve. Imagine we have the power to control the exact size and magnitude of this stream of light (x, x'). Envision we are able to either increase or decrease the magnetic force of our field infinitely. Imagine we pass through this field just one unit of light. Picture we start decreasing the power of our magnetic field. Light curve will start decreasing. Imagine we continue in this process slowly. At a certain point, light will be straight and parallel to our x axis. Suppose we continue decreasing our magnetic force. Instead of bending light will start stretching. If we continue this process our unit of light will break at the following point: 1.11 times 9 = 9.99. After this point our light will disappear from our common four-dimensional coordinate system which is in fact 36 dimensions following alkesra rules since 4 times 9 = 36 and enter into another coordinate system or another universe. But alkesra shows us that the breaking leaves 0.01 unit of dark matter in our universe: 10 - 9.99 = 0.01. Moreover, this breaking does not happen without releasing a huge amount of dark energy. Following alkesra rules, we can calculate dark energy in the following manner.

We know that at 9.99 number one divides into two perfect halves if we exert the same amount of force on both sides of our number line. The result of this breaking will be 4.995 on both sides. The two halves will not appear in our universe as we have seen earlier but they will leave 0.005 amount of dark matter on both sides right in the middle of our number line.

Notice that Alkesra informs us that dark energy is nothing but the perfect absolute value of any number. Try to stretch a rubber band and see the amount of energy it produces when it breaks.

So 4.995 becomes |50| as a perfect absolute value and |50| multiplied by 2 = |100|.

Thus, alkesra tells us that if we break one beam of light we will harvest 0.01 amount of dark matter and provoke 100 units of dark energy. This idea will be better explored and explained in the next section.

### **Mass of the Photon**

The math tells us that with every breaking of light there remains an amount of matter that we do not see. Our normal math will tell us that at ten one will divide but if we use the speed of light, 1 breaks at 9.99. I believe that the 0.01 is nothing but the dark matter that very soon we will be able to harvest.

Notice that if we multiply 0.01 by 100 we get our 1 again. This simple fact will help us figure out the mass of the photon as I am going to explain.

As every scientist knows, the great Planck made all kinds of experiments and came to the conclusion that there is always a constant number  $6.626 \cdot 10^{-34}$ . He could not get inside this constant ( $h$ ) but he was at least able to imagine that light is quantized hence quantum mechanics. Physicists like Schrödinger, Heisenberg and Einstein focused on the wave manifestation of photons or treated  $h$  as an unfathomable value from which they can start their calculations. Because they did not have the right tools, they could not go inside Planck constant.<sup>6</sup>

5 Einstein, Albert (2003), "Physics and Reality" (PDF), *Daedalus* **132** (4): 24, says for instance that "The question is first: How can one assign a discrete succession of energy value  $H_\sigma$  to a system specified in the sense of classical mechanics (the energy function is a given function of the coordinates  $q_r$  and the corresponding momenta  $p_r$ )? The Planck constant  $h$  relates

As a case in point, the great Schrödinger developed his wave mechanics by referring the universal wave aspect not to ordinary physical space-time, but rather to a profoundly different and more abstract 'space'. The domain of Schrödinger's wave function is configuration space (Schrödinger, 1928) Ordinary physical space-time allows more or less direct visualization of cause and effect relations. In contrast, configuration space does not directly display cause and effect linkages. Sometimes, nevertheless, it seemed as if Schrödinger visualized his own waves as referring to ordinary space-time, and there was much debate about this. (Heisenberg, 1967) Clearly they did not have the right tools. Alkesra says that Planck's constant is nothing but the overall value of one photon. To find out the mass of the photon we need to consider  $h$  as representing number 1<sup>7</sup>

Let us consider Planck constant as the perfect quantum by which light behaves. We need to consider the constant as an overall value of various values that we do not know about.

We already know that using the overall value of number 2 is the most accurate way to get our absolute perfect value from the overall value. And if we get rid of the *devil's value* we will get an accurate perfect absolute value.

We know that the difference between the value of 2 and 1 is sixty ( $155.985 - 95.985 = 60$ ) so 60 is almost 26 percent of the overall value of number 1 (155.985). If we divide  $h$  by 100 and multiply it by 26 we find the value that we need to subtract from Planck's constant which is equal to

$1.72276 \cdot 10^{-34}$ . Thus,  $6.626 \cdot 10^{-34} - 1.72276 \cdot 10^{-34} = 4.9033 \cdot 10^{-34}$ .

$4.9033 \cdot 10^{-34} - 0.665 \cdot 10^{-34}$  (devil's constant transformed to match our value) =  $4.2383 \cdot 10^{-34}$ . This the absolute perfect value of a photon. So the mass of the photon equals  $4.2383 \cdot 10^{-34}$  divided by  $10 = 4.2383 \cdot 10^{-35}$ .

The amount of dark matter will be the absolute perfect value divided by 100 as we have seen earlier. So  $4.2383 \cdot 10^{-34}$  divided by 100 =  $4.2383 \cdot 10^{-36}$

the frequency  $H_\sigma/h$  to the energy values  $H_\sigma$ . It is therefore sufficient to give to the system a succession of discrete frequency values"

<sup>7</sup> Actually Planck used number 1 as a starting value for his calculations and thought it were a necessary step of pure

mathematical reasoning. See Kragh, Helge (1 December 2000), Max Planck: the reluctant revolutionary, PhysicsWorld.com

If we stretch  $h$  to its breaking point which is 700 times ten to the power -34 (Remember that we said earlier only light is perfect and therefore only light breaks at its perfect absolute value), We will get two perfect halves (actually they will disappear from our universe) of  $3.5 \cdot 10^{-32}$ . The only trace of their presence is the amount of dark matter they would leave behind which is  $3.5 \cdot 10^{-32}$  divided by 100 =  $3.5 \cdot 10^{-36}$  multiplied by 2 =  $7 \cdot 10^{-36}$ . Notice that dark matter increases when we stretch light to its breaking point.

$H$  will divide into two perfect halves.  $3.5 \cdot 10^{-32}$ . Each half with huge dark energy of  $35 \cdot 10^{-32}$  or the sum of  $7 \cdot 10^{-31}$ . And a huge photonic exploding energy of 31.7 percent of the actual value of dark energy since according to the standard model of cosmology, dark energy accounts for 68.3 percent of the observable universe.

### **Wave-Particle duality and the double slit experiment.**

For years the wave-like behavior of particles fired on a double slit have perplexed the greatest minds especially Einstein who was never satisfied with the results. The main ontological problem intrinsic to this experiment is whether our logic or common sense is in contradiction with the laws of nature or not? Most scientists accept the weird phenomenon of particle duality and consider Schrödinger wave equations and Heisenberg's uncertainty principle as enough tools to deal with the biggest unanswered mystery in Quantum physics. As a case in point, the great Niels Bohr regarded the duality paradox as an intrinsic or metaphysical reality of nature (Manjit, 2011). In a famous response to Einstein's skeptic observations, Bohr famously exclaimed: "stop telling god what to do with his dice." To my mind, there is no discrepancy between common sense and the laws of nature. Einstein like Newton before him guessed right but was just approaching the issue with the wrong tools. Again, Alkesra, this new mathematics is able to answer easily this problem.

First we know that we can only visualize four dimensions: new and new or xyz and naught for the coordinate of time or w, the extra coordinate axis, orthogonal to the other three. Charles Howard Hinton coined the terms *ana* and *kata*, from the Greek words meaning "up toward" and "down from", respectively. Besides, a position along the *w* axis can be called *spissitude*, as coined by Henry More etc...

What matters to us here is that researchers such as Ambinder et al (2009) using virtual reality find that humans in spite of living in a three-dimensional world can without special practice make spatial judgments based on the length of, and angle between, line segments embedded in four-dimensional space. In other words, the four-dimensional space is not alien to us but rather part of our genome.

Let us consider number four as a quantum of dimensions by which we rationalize and conceive our universe. Let us consider this value common to all that exists in our universe. Indeed, we cannot separate time from space and this intuition gives us the right to ascribe the value of 1 to the four dimensions of space and time. So if one is 4 then 2 must be eight etc...the following table summarizes all the values of our quantum dimensions.

Imperfect numbers	Dimension value
1	4
2	8
3	12
4	16
5	20
6	24
7	28
8	32
9	36

The overall value of our dimensions is 180 or half a circle (180 degrees or pie over two). We can reach full circle if we add another 180 degrees in the negative coordinates.

Particles at the micro-level have the ability to stretch and return to their own value (our common four dimensional value) according to their levels of mass and speed. But they stretch in packs following the quadric-dimensional modal described above. If a particle disappears from our fourdimensional system it does not signify that it no longer exists. It just went into another quantum of dimensions that we cannot unfortunately observe. In other words, particles at the micro-level have the ability to stretch and reach other dimensions. Alkesra tells us that only light can reach 36 dimensions or 180 degrees level of observation. We, human beings, are barely able to perceive 4 dimensions out of the 180 dimensions that exist in our universe.

Obviously, String Theory has showed that the smaller we are the bigger dimensions we see. Imagine if we, human beings are the size of a bug. How many dimensions will we be able to see if we were slowly moving along the plane field of a palm hand? It follows therefore that physics and common sense tells us that the smaller we are the bigger dimensions we can visualize. Add to this variable speed and velocity. Light is of course and as we have seen, a perfect number and it is the only medium that can reach the whole 36 coordinate systems and return without breaking. All other particles cannot because they are not speedy enough. However they are small and swift enough to see more dimensions than we humans can see. The double slit experiment exemplifies this ability that particles have and we do not. If we pass an electron through a single slit, the electron perceives four dimensions and behaves like expected but if we fire the electron through two slits, the electron sees two coordinate systems and eight dimensions. Consequently, the electron will stretch to two and behave like a wave.

But this does not explain why the electron stops behaving like a wave when we put a detector behind the slit. The answer is very simple as a matter of fact. We have one detector which is in pure terms a magnetic field and a light propagated able to reach 180 dimensions. Thus, instead of seeing 8 dimensions, our electron will see just 4 or one coordinate system and behave as if the slit was one. In other words, the magnetic field and the light inform the particle that there is no need to stretch because there are only four dimensions.

## VI. CONCLUSION

This attempt is just the tip of the iceberg in a very promising field of mathematics that a singlehanded person like me can see and can achieve. The reasons behind the importance of Alkesra are at least twofold. First, we cannot restore something that has not been broken by nature or by us before. In other words, if we allow ourselves to intervene in order to balance any equation we should also allow ourselves to break the forming parts first. Otherwise, our mathematical endeavor will always be missing an important element. This lack of such a vital component in mathematics was obviously obscured by our tendency to deal with nature at the observable macro-level. However, when we started dealing with the behavior of particles at the micro-level, the principle of causality seems to be out of fashion and even trite.

Second, Alkesra clearly enables us to escape the boundaries of our four-dimensional thinking and the complexity of poetic approximation each time we are helpless in front of a singularity. It is as if instead of having a single eye we suddenly developed multiple eyes. I cannot even imagine the scope of influence of Alkesra on the development of science in all fields. But Alkesra does not stop here-It is the only way, to my mind with which we can explain not only particle duality but also essential questions such as the age of the universe and how much our universe is going to expand and when is going to stop the expansion. Moreover, if we are able to harvest dark matter, we will be able to see outside the boundaries of our universe and probably Finally, I hope that Alkesra is "crazy enough" not only to be true as the great Bohr once said but to open a new era of scientific development that might make the world of science fiction a reality.

### REFERENCES

- [1]. Albert Einstein(1905) "*Zur Elektrodynamik bewegter Körper*". *Annalen der Physik* 17: 891; English translation On the Electrodynamics of Moving Bodies by George Barker Jeffery and Wilfrid Perrett (1923); Another English translation On the Electrodynamics of Moving Bodies by Megh Nad Saha (1920).
- [2]. Ambinder MS, Wang RF, Crowell JA, Francis GK, Brinkmann P. (2009). Human four-dimensional spatial intuition in virtual reality. *Psychon Bull Rev.* 16(5):818-23. doi:10.3758/PBR.16.5.818 PMID 19815783 online supplementary material
- [3]. Boole, George (2003) [1854]. *An Investigation of the Laws of Thought*. Prometheus Books.
- [4]. Balazard, M.; Saias, E.; and Yor, M. "Notes sur la fonction  $\zeta$  de Riemann, 2." *Adv. Math.* **143**, 284287, 1999.
- [5]. Colin Pask (2013), *Magnificent Principia: Exploring Isaac Newton's Masterpiece*. New York: Prometheus Books.
- [6]. Fearn, Nicholas (2007). *The Latest Answers to the Oldest Questions: A Philosophical Adventure with the World's Greatest Thinkers*. New York: Grove Press.
- [7]. Hadamard, Jacques (1896). "Sur la distribution des zéros de la fonction  $\zeta(s)$  et ses conséquences arithmétiques". *Bulletin de la Société Mathématique de France* **14**: 199–220.
- [8]. Harrison, David (2002). "Complementarity and the Copenhagen Interpretation of Quantum Mechanics". *UPSCALE*. Dept. of Physics, U. of Toronto.
- [9]. Heisenberg, W. (1930). *The Physical Principles of the Quantum Theory*, translated by C. Eckart and F.C. Hoyt, University of Chicago Press, Chicago, pp. 77–78.
- [10]. Heisenberg, W., (1967). Quantum theory and its interpretation, quoted on p. 56 by eds. J.A.
- [11]. Wheeler, W.H. Zurek, (1983), *Quantum Theory and Measurement*, Princeton University Press, Princeton NJ, from ed. S. Rozenal, *Niels Bohr: his Life and Work as seen by his Friends and Colleagues*, North Holland, Amsterdam.
- [12]. Kumar, Manjit (2011). *Quantum: Einstein, Bohr, and the Great Debate about the Nature of Reality* (Reprint edition ed.). W. W. Norton & Company.
- [13]. Riemann, Bernhard (1859). "Über die Anzahl der Primzahlen unter einer gegebenen Grösse". *Monatsberichte der Berliner Akademie*. In *Gesammelte Werke*, Teubner, Leipzig (1892), Reprinted by Dover, New York (1953).
- [14]. R. Hill. (1998). *The Mathematical Theory of Plasticity*. Oxford: Oxford University Press.
- [15]. Roshdi Rashed (November 2009). "Al Khwarizmi: The Beginnings of Algebra". Saqi Books.
- [16]. Schrödinger, E. (1928). Wave mechanics, pp. 185–206 of *Électrons et Photons: Rapports et Discussions du Cinquième Conseil de Physique, tenu à Bruxelles du 24 au 29 Octobre 1927, sous les Auspices de l'Institut International de Physique Solvay*, Gauthier-Villars, Paris, pp. 185–186; translation at p. 447 of Bacciagaluppi, G., Valentini, A. (2009), *Quantum Theory at the Crossroads: Reconsidering the 1927 Solvay Conference*, Cambridge University Press, Cambridge UK, ISBN 978-0-521-81421-8.
- [18]. Stewart, James B. (2001). *Calculus: concepts and contexts*. Australia: Brooks/Cole
- [19]. "The International System of Units, Supplement (2014): Updates to the 8th edition (2006) of the SI Brochure" (PDF). International Bureau of Weights and Measures. 2014. p. 14.