Mount Clemens/Michigan March 1, 1972

EXPLAINING THE MEASURING NUMBERS SYSTEM By: Paul Haralyi Fejer

The present day Numbers System was originated some 2500 years ago by a Greek mathematician named Pythagoras. His work, his inventions and his guidance in the field of numerology was so basic, so successful and so owerhelming that all number systems of today rest on his work.

Through the centuries many mathematicians' dedicated work made the numbers system a completely unique and in all respects a totally harmonious masterpiece, which in the hands of trained scientists became the backbone of all the knowledge we have today.

Why is the numbers system so important?

Because the numbers system represents a tremendous order, an unbelieveable solid frame of reference. Mathematics is the only science which can give answers to the unknown. One can build a mathematical structure, a so called formula or equation which in turn represents real situations in life. Following this formula or equation we can repeat the situation step by step and arrive at the same results time and time again.

As the formulas and equations are tested for validity and proved to be valid, they become a part of mathematics, accepted as "truth". Because these "truths" always remain the same, we are able to use them in our thinking process as a basis for probing the unknown.

Through mathematics we are able to design and manufacture roads, cars, trains, aeroplanes, rockets, ships, etc.; we are able to travel to the Moon. Without numbers and the numbers system our life just could not exist. Our life is governed by numbers from the minute we awake till we fall asleep. Our way of life, our society as we know today just could not exist without the number systems. We have no known documents detailing how this wonderful world of numbers started from the very beginning. We only know the results of the work of the pioneers.

I would like to make an attempt to reconstruct the very first experiments with the numbers and try to reason out the consequences from these experiments. As I have found, these experiments are very useful devices, because they give some inside understanding of how the results consequently came to reality.

But what am I really after?

We try to get to the very basic, to the very first discoveries which helped Pythagoras develop the number system. If we are successful with this work, we will be able to use this knowledge, this information with our present work, namely to establish the basis for the new, till now unknown, Measuring Numbers System.

Let us begin. Imagine that we have a handful of marbles. Let the marbles drop on the floor. In a short time the marbles are in a random, unmoving position on the floor.

The first thing that comes to our mind is to count, how many marbles are on the floor? As we are counting the marbles, we find that perhaps we made a mistake, so we count them again. (It is 17).

To avoid making a mistake and to improve our ability to count the marbles in a shorter time, we came to the idea that we will be better off if we put the marbles in order. The question now arises "what kind of order?". First we start with the circular form, because the circular form looks very symmetrical and in nature we can find many circular forms. To our amazement we are not helped too much. Although we have an order, the counting still remains very slow and tiresome. So the circular form is not the one we are looking for. Next, we try our hand with the triangular form. This form is definitely an improvement over the circular form. We have to learn to count the base row and how many levels we have and memorize the results. This way we are able to speed up our counting process. With the triangular form we definitely have to have some training and knowledge in the triangular numbers in order to speed up our counting process. In other words, we have to have some additional brain work in order to speed up our counting process. The triangular form is a definite help to easily recognize the number structure. What I mean is that we can easily see if the bases and the rows are full, or some places are empty.

The next form of order is a straight line. We place the marbles in a line one after the other. As we count the marbles, we find some difficulty to count them. It not only takes time, but also we may become too dizzy and may make mistakes.

As the next step, we will make two lines, two horizontal lines, a double line. Now we can count by two's. For example 2-4-6..., this will shorten our counting time considerably. Besides, we can see at once if the pairs are formed properly or not.

The next time we arrange the marbles in three horizontal lines and now we can count by three's. For example 3-6-9... etc. This is an improvement over the double line. We can easily inspect the three lines, how they are formed and it takes less time to count them. (Counting the rows).

As the last step, we rearrange the marbles in four horizontal lines. This form proves to be more compact, less tiresome to inspect as far as the fullness is concerned. We are counting now by four's. For example 4-8-12... etc. Cur experiment points to the fact, that our mind, our vision favors the horizontal rectangular form. As we experiment, we come to the special case of the so called "square" form. Both horizontal and vertical positions (numbers) are the same. This square form is the most desirable and in mathematics we are striving for this form. In formulas and equations we are often faced with the square forms. It took considerable time and effort to find a way to square the circle for example. The square form is one of the basic forms. We try to express ourself in squares when we are dealing with flat surfaces in two dimensions. The squares are used in this case as a measuring unit.

Summarizing our experiments we can come to the following conclusions:

1. We started with random distribution, disorder (or as we can say

"chaos"). From this "chaos":

2. We made an "order"

3. We made a specific kind of order, we made a "form".

These three steps I believe strongly influenced the thinkers, the philosophers. They proclaimed, that in the beginning there was chaos and from this chaos came order and from this order came form.

So the numbers system or mathematics was very close contact with philosophy from the very early days. The mathematical thinking was closely followed by the philosophers whose main effort was to find answers for the eternal questions: who are we, where do we come from, where are we going? What is the world around us, etc.? Because mathematics is the only science which can give answers to the unknown, mathematics became the science of sciences. Its foundation, its development, and is general every new discovery in mathematics goes through a very intensive research re-examination to ensure its validity, its purity, and to ensure that there is no contradiction in the new idea.

Cur experiment with the marbles are very real indeed. The marble structure, or as we see later, the point structure remained with us through the centuries. Points represent numbers and vice cersa. The line itself became the point line: Made of points!

What I wish to stress is, that the present day mathematics is built on the "marble" structure or as we call it on the "point" structure. Nothing changed in this very basic concept till today. Everything is built on the "points". The new, till today unknown Measuring Numbers System IS CUTSIDE THE REALM OF THE PRESENT DAY MATHEMATICS!

For this reason the present ONE WORLD OF MATHEMATICS is no longer alone. With the Measuring Numbers System we start another world. It is just as real as the first one. Only the basis is different. The Measuring Numbers System is based on the MOVING POINT and on the CONTINUOUS LINE where there is no gap, no hole in the line. It is continuous in all respects.

The present day point represents a body, an individual, an object or a number. It is real or if we are talking about "a" number, can be immaginary, just a name, just a concept, just something. As such it is immovable, dead or static.

With the Measuring Numbers System we are talking about a MCVING POINT. This point is a DYNAMIC POINT, it has the ability to move, to grow. The moving point trajectory is the CONTINUOUS LINE, THE DYNAMIC LINE. The dynamic line is without holes.

We may find points on this line, but these points on the line are not the structure of the line but rather an identification point on the line which represents the end of a length, or the beginning of a length, on the continuous line.

My work is not belong to the realm of the present day mathematics. There is no precedent, there is no source material in the libraries.

Mathematicians are trained on the Pythagorean foundations and develop their rigorous training to keep mathematics pure, and will vehemently object to anything which can cast a shadow of doubt on the age old science.

The Measuring Numbers System in its entire content is such an unthinkable threat. It is not only strange, but totally different! It is different because IT IS BASED ON DIFFERENT FOUNDATIONS!

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