LESSON V

THE GEOMETRIC STRUCTURES

Geometry existed before the Creation, is Co - eternal with the mind of God, it is same God.
Johannes Kepler (1630 D. C.) (Harmony of the world)

INTRODUCTION

The previous lessons have explained the nature fines - they of the price determine the proportions - time. This a test procurerà lesson adds them of this powerful concept, as the diagrams price - time will be shown to be null more than a sequenziale recording bi - determine the proportions them of solid geometric in motion.

The financial markets schiudono in the price - time within the borders of predetermines force points to you. The relative locations of these points in the three dimensions form the geometric structures. This phenomenon is not only of the financial markets. matter creates of the geometric structures clearly defined when it catches up one be stable. The geologi they apply the structure to "crystal reticulum" in order to classify minerals watching to the geometric disposition of their plans of flaking. Similarly, the chemical ones can identify an element watching to geometry of its constituent atoms. These applications are null more than simple three-dimensional geometry. Like previously explained, the financial markets are not free from the natural law, including this.

The reader can have had the opportunity in the past to try a puzzle where he imagined which figure is created when a paper piece is folded along a variety of punctuated lines. This type of mental exercise demands the use of the abstraction or the skillful hemisphere of the brain. There is least in the modern university that encourages the development of these abilities. In effects, our entire western civilizzazione primarily is based on the use of logic or the left hemisphere of the brain. In the western society if a conclusion cannot logically be derived it is presumed fallace.

It is not therefore all over the world. Various societies orient demonstrate them an emphasis on the "intuitivo judgment", or conclusions that are not limited from the demanded sequenziale derivation of the left hemisphere of the brain. In the sixth century R-avanti.Cristo, Chinese philosopher Lao Tzu, wrote the work *Tao You Ching* , that intentionally intuitiva concettualizzazione was designated in order to ask one for the truth. [1] In effects, this philosophy maintained a sure depreciation for the logical reasoning, considering it part of a created artificial world from the man.

Referring to the philosophy of the Taoismo, philosopher Chuang Tzu declared in the 400 R-avanti.Cristo:

"the immensest acquaintance does not make the knowledge necessarily; to reason will not render the men tests in making it. The tests have decided against both these methods.

In this lesson the reader will use its abilities of abstraction in order to see the models geometric reveals to you in the securities market. If this seems difficult to the beginning, not deprived of hope. This type of thought is practiced for centuries, and a small mental job will render this exercise the much easiest one.

GEOMETRY BI - THEY DETERMINE THE PROPORTIONS

This argument of geometry bi - they determine the proportions is valued as a first step towards the true understanding of geometry tetra - determine the proportions them. As she will be explained in the section on geometry tri - they determine the proportions, **VISIBLE E' ONLY A PART Of The GEOMETRIC STRUCTURES In OUR PERCEPTION To the TIME.**

The limitation of the bidimensional analysis of the diagrams price - time is seen during the period when a dimension of the geometric structure ends and the entire structure seems to ruotare and to expose the new face. These are the periods when the analysts of the financial markets are much confused. The cycles of which they have been observatories without warning "vanish", and appearing a new series of cycles replaces them. These analysts find again themselves to wait for maximums and minimums of a cycle that never do not arrive. In order to comprise the transition between bidimensional faces, three-dimensional geometry must be studied. The relations between the faces of these three-dimensional structures are expectable if the nature of the complete geometric structure is comprised. Three-dimensional geometry will be explained more ahead in this lesson. First, a sure one must be developed to pile of acquaintance of bottom in the shape of bidimensional geometry.

When a living cell is reproduced, inner a condition is divided to half, creating where every new cell has the half of the area of the cell originates them. This fission process creates two cells with an arranged area two times the cell originates them.

Geometrically, this process of division is represented in Figure 5.1.to, where the ABC square is the area [2] originates them in order to begin the process of division with dividing to long half the diagonal, AC. Like described in Lesson IV, **The RELATIONSHIPS PRICE - IMPORTANT TIME PIU' OF FIBONACCI**, this diagonal has length 1,414 times the side of the square, AB. The diagonal is the longer line that can be used within the square in order to divide it in two equal parts.

In order to create a square with two times the area of originates is used them the diagonal, AC, of square AB like a side of the new square, ACDE, [3] in Figure 5.1.b.

Figure 5.1.c extension one continuation of this process towards the successive division of the cell. The diagonal of square ACDE defines the next side of the new one squared ADGF. This new one squared has an area two times that one of ACDE and four times that one of the square originates them ABC.

The relati to you relationships between these three figures are like follow:

Relationships between the lengths of sides of the squares:

ABC: ACDE: ADGF = 1: √ 2: 2

Relationships between the areas of the squares:

ABC: ACDE: ADGF = 1: 2: 4

(a) (b) (c)

Squared with squared squared diagonal According to in Third in
Process of increase Process of increase

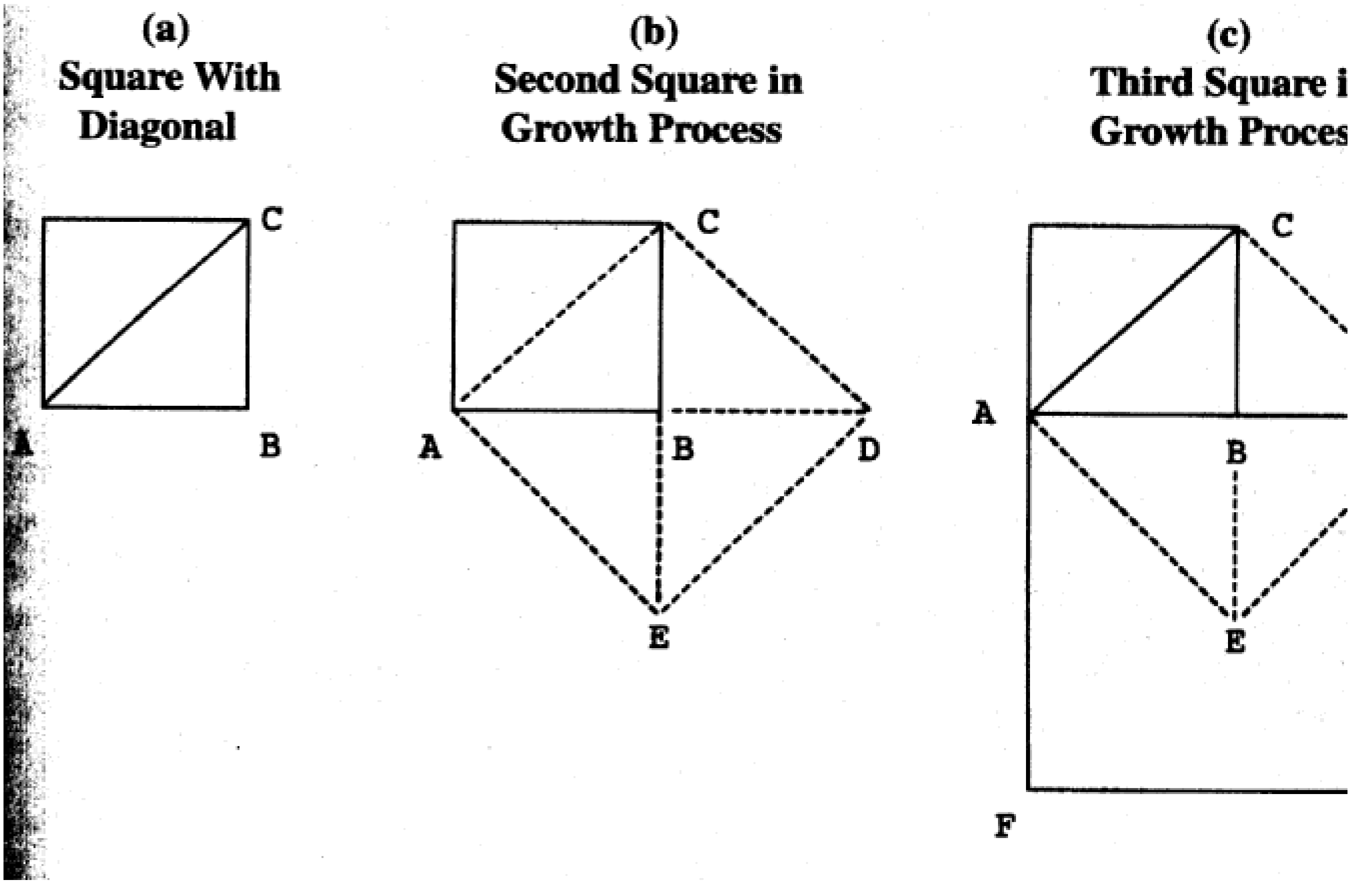


Figure 5.1
Defined process of bidimensional geometric increase from the two root.

EXAMPLES OF THE BIDIMENSIONAL DIVISION OF THE SQUARE IN THE DJIA

The process of increase shown in Figure 5.1 was visible in the securities market during the short lateral market from the maximum in 9/02/66 the lessened one in the 9/08/82. Since this period represents a model of decomposition rather than of increase, the lengths of successes to you PTV **THEY DECREASED** for the relationship of the two root. That is, the PTV represented from Figure 5.1.to it happened like the last carrier in the sequence rather than the first one.

On Diagram IV.To the PTV between the 9/12/74 and the 9/08/82 it represents the side of the square originates them, like shown in Figure 5.1.to. Since FG advanced 200 points in 400 weeks, defined also [4] the diagonal of the two adjacent squares more small, like shown in Figure 5.2.to.

Table 4.1 in Lesson IV has shown that the relationship between the two PTV: FG between 9/12/74 and 9/08/82, and EF between the 9/02/66 and the 9/12/74 was the square root of two. Therefore, EF is the PTV representative a level of the increase process that was higher than that one represented from FG. This graphically is shown in Figure 5.1.b and 5.2.b, where EF is the diagonal of the square with side FG. [5]

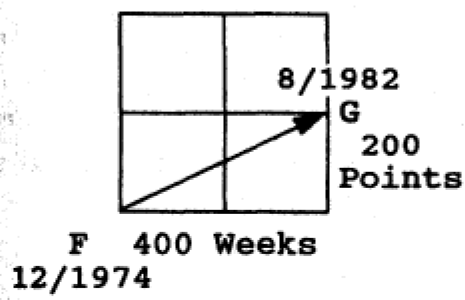
EG is the PTV representative the side of the square that defines the complete decomposition between 1966 and 1982. This graphically is shown in Figure 5.1.c and 5.2.c. Table 4.1 in Lesson IV has shown EG to have the value of the square root of two times EF or similarly, two times FG.

Figure 5.2 extension also because the spiral of increase of Fibonacci commonly is found in the financial markets. When three successes to you PTV; FG, EF, and EG are placed within the squares that contain them, the length of the side of these squares grow in agreement with the sequence of Fibonacci. Figure 5.2.to it has the length of the side of 2. Figure 5.2.b it has long side 3. Figure 5.2.c has long side 5. Two. Three and five are the numbers succeeded to you in the numerical sequence of Fibonacci.

From the first moment it can seem that 5.2.c could be designed with single four squares, rather than five. However, the squared necessity of fifth can be seen when the squares are placed within every other, like shown in Figure 5.3.

(a) (b)

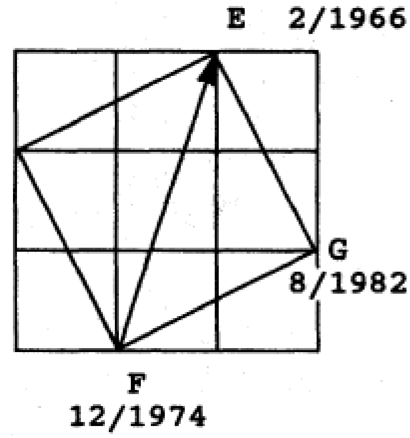
The PTV, FG, the PTV, EF are the diagonal are the diagonal of two adjacent squares of squared with side, FG



$$FG = \sqrt{5} \times 200 = 447$$

Also,

$$FG = \sqrt{400^2+200^2} = 447$$



$$EF = \sqrt{2} \times FG = \sqrt{2} \times (\sqrt{5} \times 200) = \sqrt{10} \times 200 = 632$$

(c)

The PTV, EG, are the diagonal of the square with side, EF

$$EG = \sqrt{2} \times EF = 2 \times FG = 2 \times (\sqrt{5} \times 200) = 891$$

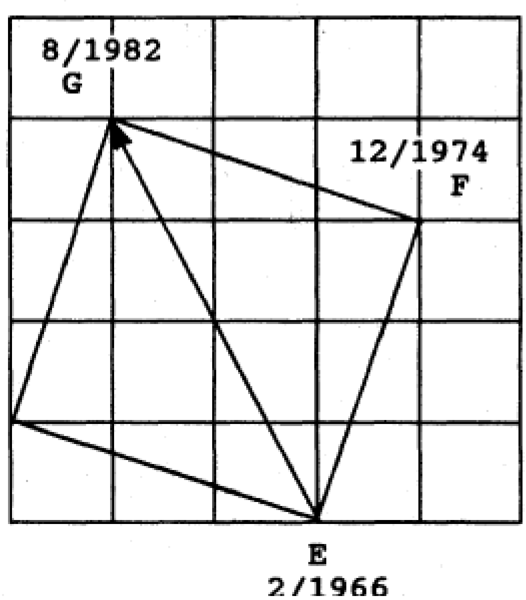


Figure 5.2

Bidimensional squares containing the PTV from 1966 to 1982. These squares contain the circles that define successive superimpositions on the three-dimensional conical propeller.

Figure 5.3 arrange the three squared from Figure 5.2 within a figure, and extension the relative increase of the largenesses of you respect PTV to you. The relationships between these PTV show one geometric

proportion of the square root of two. Everyone of these beams carriers defines the interval of operation within the phase of increase taking place within that square. After that every phase of increase ends, the successive beam carrier defines the following interval. If the increase process is that one of decomposition, like it were during the period between 1966 and 1982, the greatest beam carrier, EG, is decomposed with the proportion of the two root until when the decomposition is complete. The decomposition between dates 1966 and 1982 was complete when the beam carrier FG finished the 9/08/82 with one proportion towards the previous carriers, FG and EG, in the relationship of the square root of two.
The period between 1929 and 1932 represented also the decomposition of the increase process that taken place to that age. The length of the PTV during the decline between 1929 and 1932 was equal to the length of the PTV during the previous increase from 1921 to 1929, divided for the square root of two. This is shown in Figure 5.4 where the two PTV, AB and BUT, are shown to be in the relationship of the square root of two.

The square shown in Figure 5.2.c extended from 1966 to 1982. This square is a face of a tetradimensionale structure, that time is reflected on the two dimensions in the bidimensional diagrams price -. Only a face of this tetradimensionale structure is visible to the time as wheel in the vision. The diagrams price - procurano time a convenient historical recording of ognuna of ciascuna of these faces as they introduce themselves.

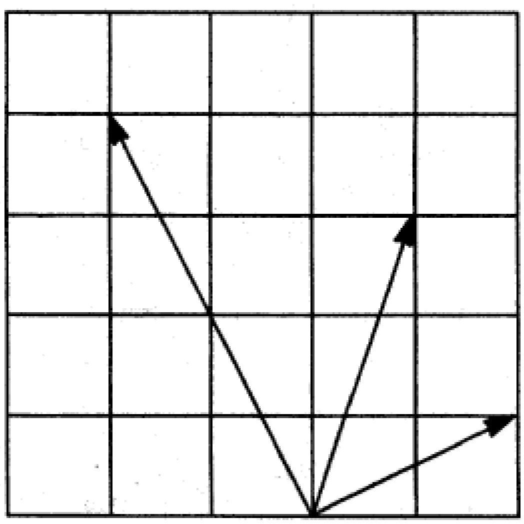


Figure 5.3
Beams carriers arrange EF, FG, EG to you from Figure 5.showing 2, the proportion of the root of two in the lengths of the PTV between 1966 and 1982.

TOPICS ARE LEFT OVER TO YOU IN THE EXAMPLES OF DIVISION OF THE SQUARE IN THE DJIA

The smaller square, defined from FG, was the successive level of following decomposition square EF. These two squared and the PTV that defined them intimately were connected. If the guideline of one of these squares changed the other would have been adapted, consequently.
The smaller PTV, FG, 2 (200 points x defined the diagonal of one rectangle 1 x 400 weeks). This PTV was the high of the square, whose diagonal, EF, were the side of the greatest successive square, like shown in Figure 5.2. Therefore, the length of EF is given from the diagonal of rectangle 1 x 3 (√ 10), shown in Figure 5.2.b, NOT From the DIAGONAL Of the SQUARE 2x2. That is,
EF = √ 10 x 200 = 632
In contrast, if EF had been defined from the diagonal of the square with side 400 would have followed

the angle of 45° more closely, like it made square 1949 - 1966, and its length would have been;
$EF = \sqrt{2} \times 400 = 566$

STRUCTURES To BIDIMENSIONAL SQUARE In DJIA (1899 - 1949)

Figure 5.4 extension the six squared that Decembers 1899 and June 1949 were developed in the securities market between. These six squared formed sides of a cube that was revealed during this period. I data for Figure 5.4 are included in Table 5.1 and 4.2.

The period between 1899 and 1914 contained two squares, that they were crosses to you laterally, like represented from NJ. The NJ value was 761, that the value of the side of the square from 1929 to 1932 was two times, and two times the value of the square from 1942 to 1949. The actions of index DJIA before the aim in the 1914 were dramatically different regarding those after the reopening. This is the cause of the esile distortion between the theoretical values and the data put into effect them when the periods are confronted before and after the term in 1914.

When the first square was completed in 1907 the decline was enough dramatic to be called "the panic of the rich man", and the prices nearly were halved in ten months.

The two squared within the NJ were arranged in order to produce the base of a greater cube, than it extended from 1899 to 1982. In other words, the square that the base of the greater structure 1899 - 1982 produced subdivided in two parts in order to create the squares one and two in Figure 5.4. This fact must be remembered since the following sections that they explain structure 1899 - 1982 deal NJ like a single greater square. Similarly, the two squared from 1914 to the 1929 compose a single greater square, as they make the squares from 1932 1949. These greater squares define sides of a greater cube that contains the shown smaller cube in Figure 5.4.

Table 5.1
Calculations of the PTV for Figure 5.4
(you see Diagram V.B)

BEAM CARRIER PRICE - TIME	DATE OF THE MINIMUM	PTV THE MINIMAL PRICE	DATE OF THE MAXIMUM	PTV THE TOP PRICE	CHANGE OF TIME (WEEKS)	CHANGE OF PRICE IN POINTS	VALUE OF THE CARRIER
AB	08/07/1932	40,56	03/09/1929	386,1	148	345	375
CD	28/04/1942	92,69	14/06/1949	160,6	372	67,9	378
BUT	24/08/1921	63,9	03/09/1929	386,1	419	322	528
JA	24/12/1914	53,2	03/09/1929	386,1	769	333	838
NJ	02/12/1899	75,7	02/07/1914	80,64	761	5	761

BUT = 528 = AB x $\sqrt{2}$
JA = 838 = AB x $\sqrt{5}$
BC = 514 ≅ BUT
CD = 378 = AB

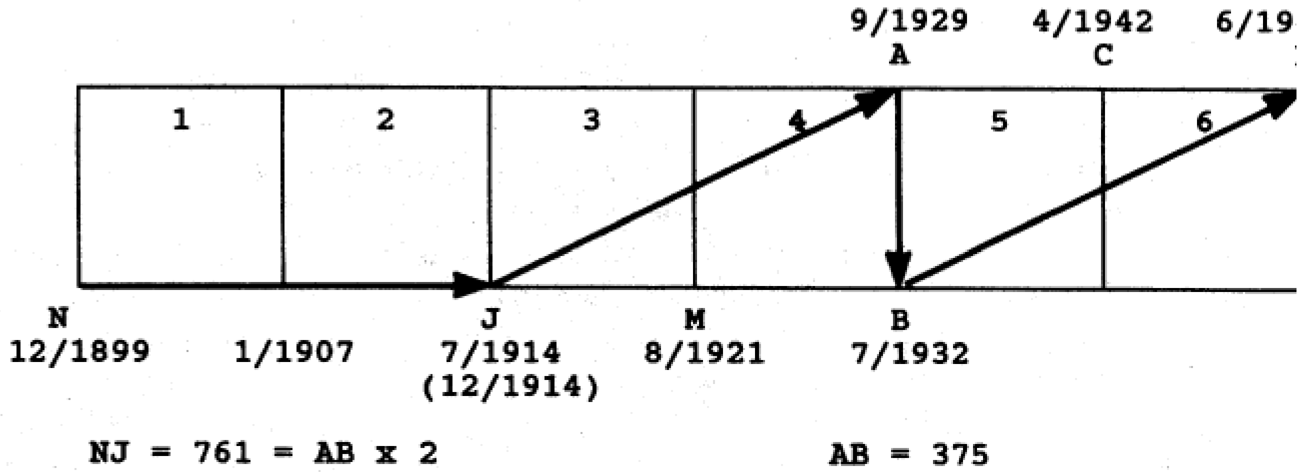


Figure 5.4

Squared forming six faces of the cube in the DJIA from 12/1899 to 6/1949 (you see Diagram V.B)

Since the market was closed between the 31/07/1914 and the 12/12/1914, NJ finished in the 7/1914 and JA began in the 12/1914.

Between 1914 and the 1929 were completed two squared. The dimension of these squares equaled the two squared between 1899 and 1914. The action within square 1921 - 1929 the square differed diagonally from the three previous for crossing.

From Table 5.1 can be inasmuch as the length of the side of the squares during this period of time was 375. That is, AB was equivalent to 375, CD was equivalent to 378, and two times this amount, 761, were employed in the dimension of the time between 1899 and 1914.

Since it is known that the length of the side of the square during this period was 375, follows that one diagonal of one of these squares is given from the relationship of the square root of two. That is,

Diagonal of the square in Figure 5.4 = $\sqrt{2} \times 375 = 530$

This is the value of BUT from the minimum of the 24/08/1921 to the maximum of the 3/09/1929.

The error between it puts into effect them value of BUT and the ideal theoretical value, calculated over, is:

$\frac{530 - 528}{530} = \frac{2}{530} = 0{,}38\%$

Figure 4.4.to it has shown that the diagonal of two adjacent squares is $\sqrt{5}$ times the length of the side of one of the squares. Therefore, it follows that JA, that is the diagonal of the two squared from the minimum of the 24/12/1914 to the maximum of the 3/09/1929, must be equivalent to:

Diagonal of the two squared in Figure 5.4 = $\sqrt{5} \times 375 = 838$

This theoretical value came to an agreement puts into effect to it given perfectly them. The represented [6] diagonal of the two squared from JA, is shown in Figure 5.4 to be 838.

The analysts who apply the traditional "angle of Gann" of 45° and 1x2 to the bidimensional diagrams the price - time is not aware of the delineated geometric disposition over. This because the diagonal of the square, BUT, did not follow the angle of 45°. Not even the diagonal of two squares, JA, followed the angle 1x2. Similarly, the analysts of Gann who design the angle 1x2 from the maximum of the 3/09/1929 constantly see the action to fall under that angle. Between 1929 and 1932 market come down 345 in 148 weeks. In contrast, the angle 1x2 come down 296 points during this same period of time. The reason for which the action it did not follow the ideal angles is:

The ACTION PRICE - TIME WITHIN a SQUARE FOLLOWS ONLY ANGLES 1 x 2, 45° OR 2 x 1 IF the GUIDELINE Of SAME the E' SQUARE IF IN SQUARE WITH the ACES Of the PRICE and the TIME Of the DIAGRAM. IF The CONTAINING SQUARE the ACTION E'

RUOTATO In ONE And The OTHER DIRECTION WITH Regarding the ACES Of the DIAGRAM, ALSO The ANGLES WITHIN THAT SQUARE ARE RUOTATI, Consequently.
The guideline of the containing squares the action between 1914 and 1932 was ruotato in the hour direction. The Appendix G has shown that the relative guideline of two PTV, JA and AB, was fixed from the spiral of increase of the square root of five. Consequently, the angles you follow from these two PTV were fixed relatively to every other, and not to the aces of the price and the time of the diagram.
This is the ulterior evidence that the true geometric configurations remain unnoticed less than the action it is seen from one perspective not limited to one single dimension. The analysis that uses the PTV supplies one such perspective.

STRUCTURES To BIDIMENSIONAL SQUARE In DJIA (1932 - 1987)
If the squares defining the activity of market from the minimum of 7/1932 until after the landslide of 10/1987 are placed together, are produced the shown bidimensional structure in Figure 5.5. The data for the PTV in this figure are contained in Table 4.1 and 4.2.
In this figure it is inasmuch as BE, from 1932 to 1966, has the same length like GH, from 8/1982 to 8/1987. [7] Both these PTV represent diagonals of two adjacent squares, that they had the side of equal length to 891. Therefore, their largeness is given from the relationship of the square root of five. That is,

$$GH = BE = 1994 = \sqrt{5} \times 891$$

This relationship was calculated in the previous lesson, **The RELATIONSHIPS PRICE - IMPORTANT TIME PIU' OF FIBONACCI.** You refer to that lesson for the calculation of the small error between it puts into effect them and the ideal theoretical values.
The difference between the two squared represents to you from GH and BE is that one employs 34 years in order to get exausted itself and the other takes 5 years alone. This is possible because the squares from 7/1932 to 6/1949 are adjacent, and the squares from 1982 to the 1987 are puttinges one over the other. This can be seen in Figure 3.4, where the rectangle that lies flat, AC, was formed soon in the increase process when the esponenziale curve was relatively inactive. As the curve forms an arc towards high the defining squares the action price - time is stacked on the top of every other, like CE in Figure 3.4, rather than close to every other as they make the beginning of the increase process.
Two other PTV in Figure 5.5 have the same length. BD is the PTV from 7/1932 to 6/1949 and has the same length of EG, from 2/1966 to 8/1982. Both these PTV are equivalent to 891 and represent sides of the complete squares.
When the squares were formed during the period of time between 1899 and the 1949 were to a level of energy more low than those creating after 1949. This is seen clearly if the entire period from 1899 to the present is traced on the same diagram. The movements of price in the previous period were only a fraction of that they happened more recently to the elevated level of energy more. Diagram I.C intentionally was traced with one to delineate price scale, rather than one logaritmica scale in order to demonstrate the dramatic increment in the oscillations of price after 1949.

$$GH = 1994 = BE = EG \times \sqrt{5}$$

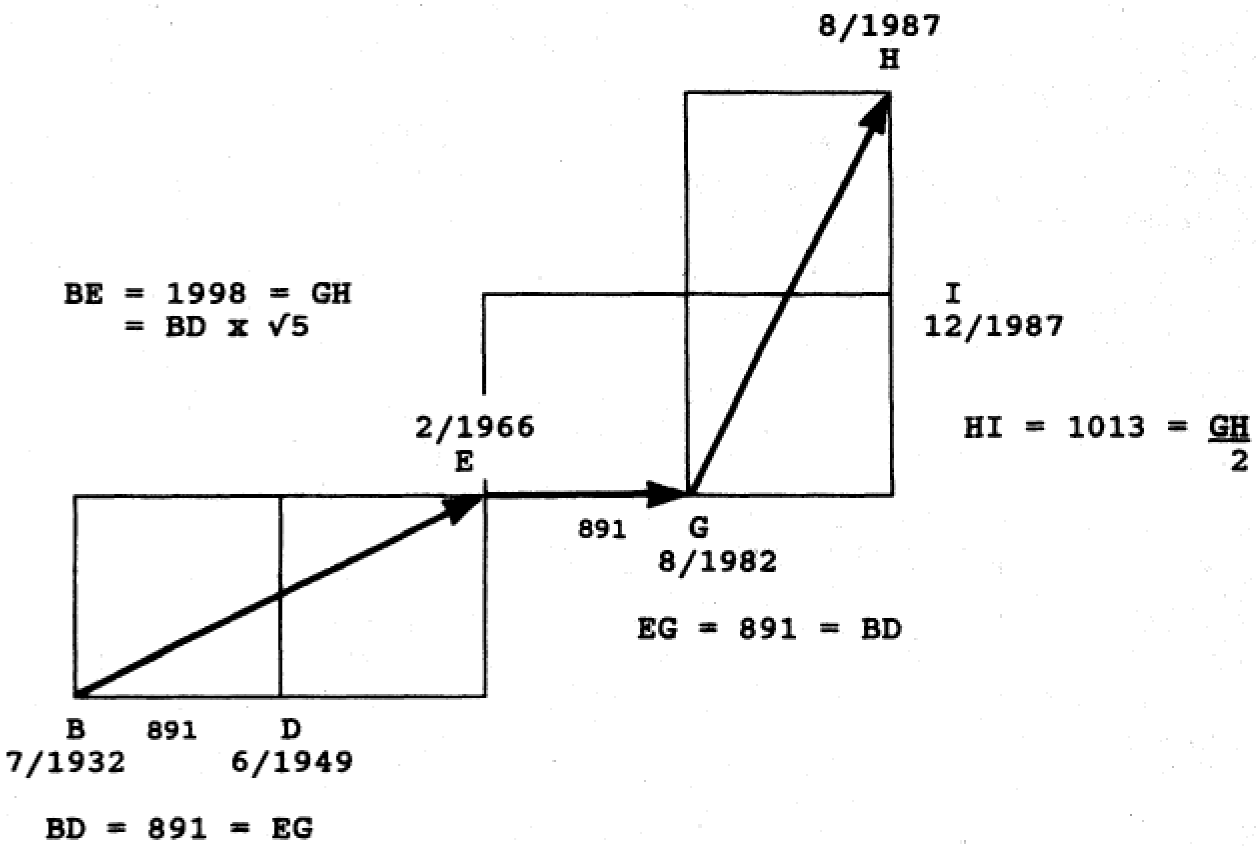


Figure 5.5

Bidimensional square structures in the DJIA from the 7/1932 to the 12/1987.
The largeness of the difference between these two periods of time, when it is measured from their PTV, is the square root of less two one, that is,

1,414 - 1 = 0,414

In order to demonstrate the difference in the levels of energy between the shown smaller squares in Figure 5.the 4 and shown greater squares in Figure 5.5, are measured and compare the relationships to you of sides of the squares in every period of time, that is,

$\frac{375}{891} = 0,42$

For a geometric explanation of this relationship, you make reference Figure 4.2 in Lesson IV, **The RELATIONSHIPS PRICE - IMPORTANT TIME PIU' OF FIBONACCI.**

PENTAGONAL SIMMETRIA (FIVE TIMES) OF THE LIVING ORGANISMS

As the living organisms often grow they demonstrate that one that it is known like the "simmetria quintupla". This simply it means a pentagonal model, like shown in Figure 5.6. pentagon possesses many interesting characteristics including the relationship of Fibonacci (PHI). Pitagora used the pentagon in order to identify the chosen members of its group much exclusive one. For centuries astrologi and the mystics have used this symbol like one instrument in the world of the "supernatural". [8]

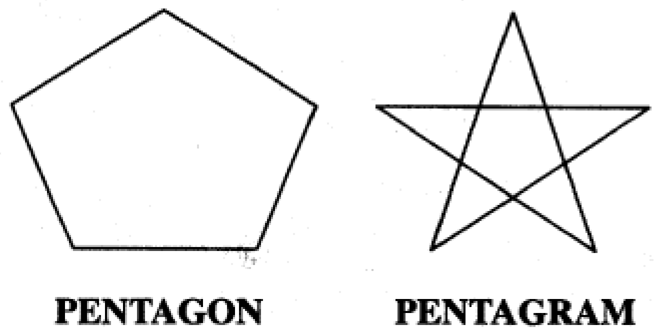


Figure 5.6
Pentagonal shape
The simmetria quintupla does not exist in the inanimati objects. Only the living plants and the animals have the simmetria quintupla. No crystal structure, is it snowflake or from the mineral world, simmetria exhibits one quintupla. The most common disposition of the floreali petals is five petals for stelo. The horticulturists know that the eatable plants, or those that produce eatable fruits, stretch to having five [9]
leaves. In contrast, the velenose plants stretch to having six or seven leaves.
Also the human figure demonstrates a pentagonal simmetria with two arms, two legs and a head, creating five you hang us to the log. To the extremities of these you hang to us, arm and leg, is attacked five fingers ciascuna.

EXAMPLES IN THE DJIA OF THE BIDIMENSIONAL PENTAGONAL SIMMETRIA

Diagram V.To extension the ellipses from Diagram II.B designed without their perimeters, that is, has been designs only the aces to you greater and smaller of the ellipses. This graphical extension that the greater and smaller aces of two united ellipses are connected in order to form the pentagonal model.

SUMMARY OF THE STRUCTURES OF THE BIDIMENSIONAL SECURITIES MARKET

The previous description of bidimensional geometry has shown as the division in nature of unit in two equal parts can be represented from the diagonal of the square. This relationship is seen in the sequence of squared that they are developed in the securities market, depending to second if the square is crossed laterally or diagonally.
The relations were shown identifying sure PTV like or the side of the square, the diagonal of a square, or the diagonal of two adjacent squares. The present values calculate them to you from the historical data had less of 1% than error when it compares to you to the ideal theoretical values.
In the next section the disposition of these squares will be shown to clearly form the three-dimensional structures like approval on the bidimensional diagrams price - time.

THREE-DIMENSIONAL GEOMETRY

To this point this lesson has only addressed bidimensional geometry. The bidimensional analysis is useful when it is watched to a single solid face of the geometric one to the time. However, one perspective three-dimensional is demanded in order to comprise the anomalies met in the price - time when the bidimensional facade of the complete structure its process of increase and the structure wheel in order to expose the new facade. This section supplies the instruments for a three-dimensional analysis of geometry price - time.
The traditional bidimensional diagrams price - time of the financial markets does not represent the movement accurately. This limitation of the bidimensional diagrams turns out in the appearance of the twisting of the price - time in and turning outside from the observation page. However, as it will be explained in Lesson X, **ASPECTS IT DETERMINE THE PROPORTIONS THEM OF THE TIME,** the action price - time is currently in motion through the three-dimensional perception, and the man takes that dimension three-dimensional and then he reduces it to the graphical price - bidimensional time.

To complete moreover the analysis, the element time is not to delineate, like represented on the traditional diagrams price - time. This fact has been tried from Albert Einstein.
Figure 5.3 have shown a bidimensional rappresentazione of the successive lessening in the length of the PTV, and the squares that contained them, during the period of decomposition from 1966 to 1982. The controparte three-dimensional of Figure 5.3 are shown in Figure 5.7.
In order to help to visualize the true present construction in this figure the squares are enclosed in circles, revealing one three-dimensional vision of a conical propeller. It confronts Figure 5.7 with the shown conical propeller in Figure 3.1.
With the acquaintance of the below conical propeller, the property three-dimensional of Diagram IV can be seen.To. squared represented from FG smallest it is squared in Figure 5.7, while the greater square in Figure 5.7 are represented from EG. The reader would have see again Diagram IV.To, while concettualizza the true shown conical structure in Figure 5.7.
The defining points of force the action price - time that moves through the perception of the man takes the solid shape of a geometric one. Every market characterizes has them the just solid characteristic one, just as every element in the mineral world has the own characteristic geometric structure.

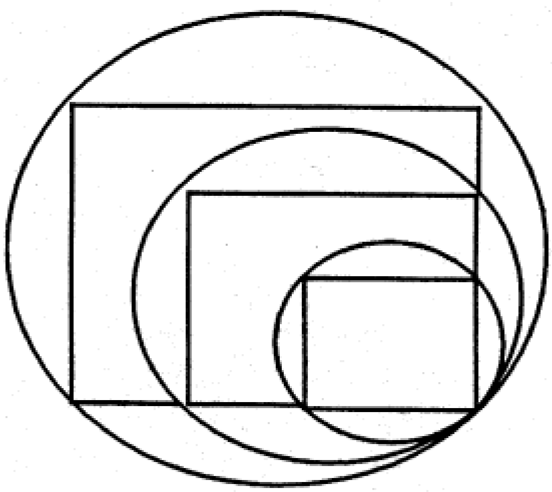


Figure 5.7
Three-dimensional sight of the decomposition of the PTV shown in Figure 5.3.
VISIBLE E' A FACE Of the STRUCTURE To the TIME LIKE WHEEL. The RELATIVE POSITION WITHIN The FACE Of the STRUCTURE DICTATES to the AMOUNT Of FACE GIA' RECORDED On the DIAGRAMS PRICE - TIME, And the AMOUNT IMMEDIATELY AVAILABLE FOR The CREATION OF CYCLICAL MODELS.
Then it becomes a issue to measure the relations spaces them between every facade and to put them all together in order to complete the entire structure.
The cube has been introduced in this course like an example of a volume. A three-dimensional volume can take to many various shapes a cube and still maintain a shape stable. Which geometric shape a market takes is one characteristic characterizes them of the specific market to be studied.
TETRAHEDRON
The geologi they recognize five Solid volumes known like "Platonic" like having special meaning. These five solid ones are only with all the equal facades and inner angles to every other.4 facades are the tetrahedron (), the octahedron (8 facades), the cube (6 facades), the icosahedron (20 facades) and the dodecahedron (12 facades).
The tetrahedron is a shape found in many points in nature. It is the structure that supplies the possible principle round separation between four bodies a common center, turning out the minimal repulsione between these bodies. It is the stabler structure that can be formed from four ties. The tetrahedron is composed from four equilateral triangles (all sides is equal), as shown in Figure 5.9.to. In geology, the tetrahedron is a used base in order to classify one of single the six arranges crystalline (quadrangular),

from which varieties are composed one of minerals, like the tetraedrite ones, the rutilo, anatasio and the many others.
The tetrahedral structure is a base on which various chemical compounds are constructed. Some of these are list to you under.
[10]
Methane CH Zn zinc
Silano SiH_4 berilio Be
Germano GeH_4
Also the base of the life on the Earth, the water (H2Or), it assumes the tetrahedral shape. The two hydrogen atoms form an angle of 104,6° with the atom center them of oxygen, like shown in Figure 5.8.b.

(a) (b)
Angle centers them within Angle centers them
A perfect tetrahedronwithin the water

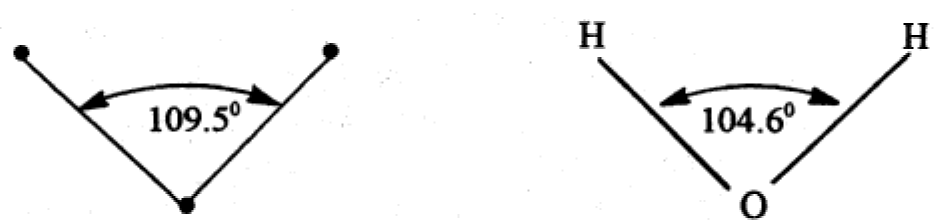


Figure 5.8
Angle centers them of the tatraedro.
The angle within the water is leggermente smaller of the found ideal angle 109,5° within the perfectly symmetrical tetrahedron, shown in Figure 5.8.to. The small difference is due to the two seems of electrons in the H2Or. The electrons disappear to you leggermente demand more space of electrons join to you. Therefore, the two hydrogen atoms are pressed with five degrees from the perfect tetrahedron.

THE TRIANGULAR PYRAMID

If two tetrahedrons are placed together with one facade in common form one triangular pyramid with one base to four sides and four facades in the shape of equilateral triangles, like shown in Figure 5.9.b. An example of a chemical structure that assumes the shape of the triangular pyramid is the ammonia, NH_3. The pyramidal shape is found also in many points in nature, like pure the structure made from the man known like the "Great Pyramid" in Egypt.

DOUBLE TRIANGULAR PYRAMID (OCTAHEDRON)

This process can together be continued putting two triangular pyramids with the square base like common facade. This structure forms an other solid platonic one, the octahedron shown in Figure 5.9.c. An example of a mineral with the octahedral simmetria is the fluorite ones.

EXAMPLES OF TETRAHEDRAL STRUCTURES IN THE DJIA

The section "Topics Advances you" of the Lesson has explained that there are four shown equilateral triangles on Diagram I.To: ABC, CDF, EHI and IJK. These four triangles become part in two groups: (1) the two triangles point C forms from the beam ruotante carrier round to you, i triangles ABC and CDF; (2) the two triangles point I forms from the beam ruotante carrier round to you, i triangles EHI and IJK.

(a) (b) (c)
sight from the high of the two tetrahedrons four tetrahedrons
tetrahedron (pyramid triangular) (octahedron)

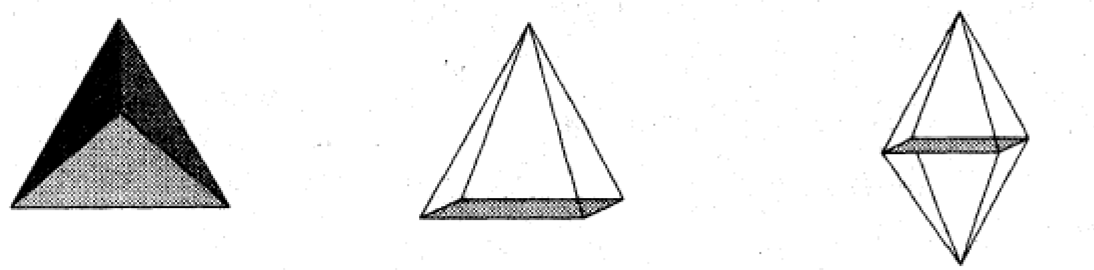


Figure 5.9
Composed of tetrahedral structures
In order to visualize a formed three-dimensional structure from these triangles re-united them, therefore lines BC and CD join (the B points and D becomes the same point). Folded triangle CDF around therefore distances AF = AC = CF. This clearly forms the tetrahedron with triangle ACF like base. If this seems difficult, makes reference Figure 5.10.to, where vision from the high of this tetrahedron with the correspondents is shown one heads from Diagram I.To.
Triangles ABC, CDF, ACF, and AFB(D) form the four facades of the three-dimensional tetrahedron that extends from the point To to the F point on the seen bidimensional diagram on Diagram I.To.
According to tetrahedron on Diagram I.To H can be seen if HI and IJ are puttinges together, (and J becomes the same point), and triangle IJK is bent around therefore that distances EI = IK = EK. This clearly form an other tetrahedron with triangle EIK like base.
This tetrahedron is shown in Figure 5.10.b. The two be tetrahedrons are hour identify in how much model to you to you in the three dimensions between the points To and K. These structures are clearly present, since the model of the PTV defined one series of equilateral triangles.

(a) (b)

Tetrahedron ACF on Diagram I.To tetrahedron EIK on Diagram I.To

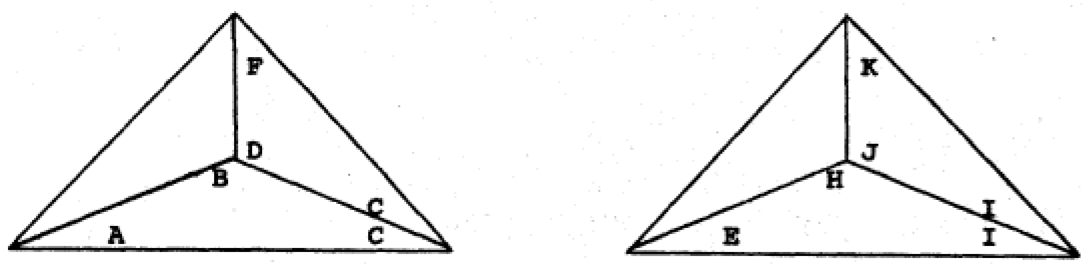


Figure 5.10
Tetrahedral structures in every day DJIA (3/1991 - 10/1991)
The next step is to see which greater structure is formed from these two tetrahedrons. You overlap the two extremities around and you join AB with JK. The points B, D, H and J become the same point in this three-dimensional structure. This means that two tetrahedrons have been puttinges together with one facade in common. The common facades are ABF from first tetrahedron and EHK from according to tetrahedron.
One seen from the high of this structure is shown in Figure 5.11.
The action price - time from the point To to complete the K point this single geometric structure, **THAT IT TAKES TO THE SHAPE OF ONE PYRAMID.** The base of this pyramid is a square with sides AC, CF, EI and IK. Perhaps, it is not a coincidence that the great pyramid characterized in Egypt takes this shape.

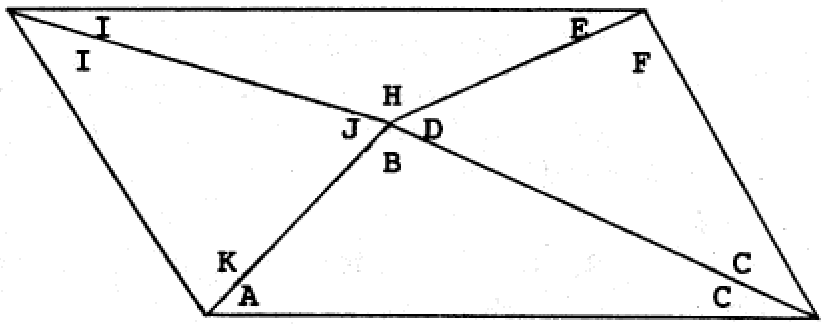


Figure 5.11
Two tetrahedrons from Figure 5.10 places together with triangles ABF and EHK like common faces. The points indicate to you with letters correspond with Diagram I.To.

CONTAINED GEOMETRIC STRUCTURES WITHIN the CUBES

The tetrahedron is one of the two structures "cube - centered "(the other is the octahedron). That is, it can be placed symmetricalally within a cube, like shown in Figure 5.12.

Everyone of the six squared in this figure is a facade of the cube and is divided diagonally from the edges of the tetrahedron. It confronts this figure with Figure 5.1.to where the diagonal of the square was shown to be the first step in the process of bidimensional increase. Also Lesson IV, **The RELATIONSHIPS PRICE IMPORTANT TIME PIU' OF FIBONACCI,** it has shown that the relationship of the two root was found the securities market everywhere.

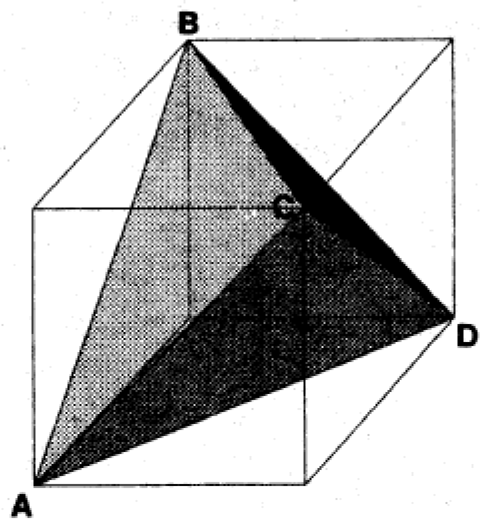
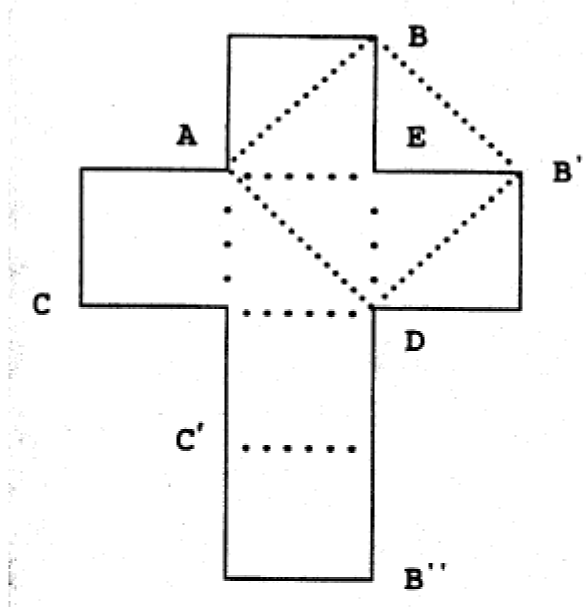


Figure 5.12
Tetrahedron to the center of the cube.

If the facades of Figure 5.12 schiuse and are put extended on a bidimensional plan, like are the diagrams price - time, the result would have to be Figure 5.13. The points with letters in Figure 5.13 correspond with those on the three-dimensional rappresentazione in Figure 5.12.



If the six squared in this figure have the side of equal length to one, then one diagonal of one of these squares, like DB', is equal to the square root of two. Similarly, a square that has DB' like side, ABB' D, has one length of diagonal, BD, of two. Also the two adjacent squares, DC' and There B '', have one diagonal that crosses both squares with one length of the square root of five.

Figure 5.13
Cube centered on the tetrahedron opened in the two dimensions.
Figure 5.13 bidimensional rappresentazione of a complete process of tetrahedral increase is one. It confronts this figure with Figure 5.1.c. To the first look their likenesses could not be obvious. However, they represent the same model of three-dimensional increase cube - centered tetrahedral glare on a bidimensional plan. In Figure 5.13 the square in top, AB, is equivalent to the ABC square in Figure 5.1.c. The square formed from the points of logon ABB' D in Figure 5.13, correspond with square ACDE in Figure 5.1.c.

THREE-DIMENSIONAL PERSPECTIVE OF SQUARE 1966 - 1982

On Diagram IV.To EF it is angled towards the observer and outside of the page. To the F point, FG folds far away to an angle from EF and more towards the page. To the G point, GH Angola nearly to straight angle respect EF and tip within the observation plan. Therefore, the F point on the diagram is more close to the observer while the H point is more far away. The points and, F, G and H are not only places where the prices change direction, but also points hinge for the action price - time in the three dimensions. It watches to Diagram IV.To and time visualizes the action price - that comes towards the long observer a plan defined from EF. Similarly, time watches the action price - to fold itself to the F point and to head more to an angle towards the page than observation. An angle easier to visualize is triangle GHI that clearly impernia to the G point and it is arranged to angle in the observation page.

> **THIS EXERCISE In NECESSARY The E' VISUALIZATION Because of the LIMITATIONS Of The BIDIMENSIONAL DIAGRAMS PRICE - TIME, THAT THEY RECORD The EFFECTS SUBSEQUENTLY YOU SQUARED - DETERMINE THE PROPORTIONS THEM THAT THEY MANIFEST In the PRICE - TIME.**

GEOMETRY OF THE ADJACENT CUBES

If two cubes are placed near one with the other with a facade in common, appear like in Figure 5.14, where the following measures can be made:

1. the distance, is two times the length of a side of a cube.
2. The distance, uniform for the square root of two give the diagonal, DE, of a square on the facade of one of the cubes.
3. The side of square, BD, multiplied for √ 5 give the diagonal through two adjacent squares, represent to you from AE and BE.

Figure 5.14 time is used like a model for the diagrams price - bidimensional. Although two adjacent cubes are used in this model, in three-dimensional geometry the action price - time can be imperniata to the D point, and square DE is currently the remote face of the first cube represented from square DF. This would have to be the case if the first cube still had not been completed when the D point was caught up. For to be complete a cube it must have all the six revealed facades.

The square, FD, are the common face between the cubes.

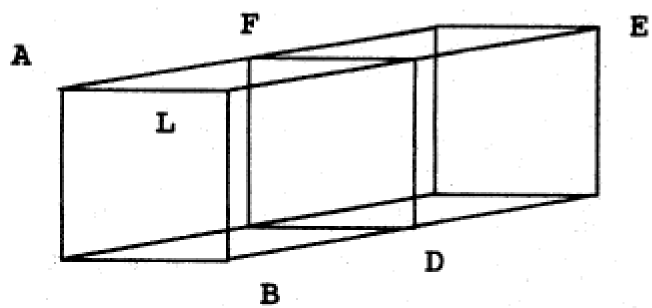


Figure 5.14

Geometry of two adjacent cubes with a common face.

THREE-DIMENSIONAL CUBICAL STRUCTURE IN THE DJIA.

The SECURITIES MARKET REVEALS WITH ONE CHARACTERISTIC GEOMETRIC STRUCTURE THAT E' DEFINED WITHIN the LIMITS Of the SQUARES In The TWO DIMENSIONS. SIX OF THESE SQUARES FORM THE FACES OF A CUBE IN THE THREE DIMENSIONS.

Diagram V.B extension the two adjacent cubes from Figure 5.14 overlapped on the diagram of the DJIA from 1899 to 1993. It is used a logaritmica scale of price, therefore all the action price - time can be included on a single diagram. This scale produces a distortion in the aspect of the geometric structure as the prices go up towards the vertical axis. However, since the test of this analysis is supplied with the PTV calculates to you, and those do not design to you graphically, the models on the diagram only have need of consultation.

The cubical structure on Diagram V.B supplies the three-dimensional perspective necessary in order to comprise as every facade of the cube is developed. The points with letters on Diagram V.B corresponds with those in Figure 5.14.

Diagram V.B contains various PTV that previously were shown in Tables 4.1 and 4.2. Those pertinenti to this argument are repeated here and group together to you with the PTV of similar value.

AE = 1997 BD = 891 BL = 288 (according to squared of twelve)
BE = 1998 EG = 891 CL = 287
GH = 1994
= THE 1710 JE = 2832 DE = 1209

Three of these PTV: GH from the minimum in 1982 to the maximum in 1987; AE, from the maximum of 1929 to the maximum in 1966; and BE, from the minimum of 1932 to the maximum of 1966, are of equal length.

Geometrically, these PTV represent the diagonal of two squares, similar to those shown in Figure 5.14. Moreover, the length of BD, from the minimum in the 1932 lessened one in 1949, is equal to EG, from the maximum in the 1966 lessened one in 1982. These PTV represent sides of the squares that define the cube that is revealed during this period.

Since BD defines the length of the side of the square, and BE is the diagonal of two similar adjacent squares, the length of BE must uguagliare the length of BD multiplied for the square root of five. That is;

Theoretical value of BE = BD x √ 5 = 891 x √ 5 = 1992,3

It puts into effect them BE value was 1998, producing an error from the calculated ideal theoretical value over of;

$$\frac{1998 - 1992,3}{1998} = \frac{5,7}{1998} = 0,28\%$$

Similarly, Diagram V.B extension DE, from the minimum in 6/1949 to the maximum in 2/1966, to be the diagonal of a square; [11] and, from the maximum in 1937 to the maximum in 2/1966, to be the side of two adjacent squares. Therefore, the square root of two must uguagliare DE times. That is;

Theoretical value of = DE x √ 2 = 1209 x √ 2 = 1710

This theoretical value of THEM uguaglia exactly puts into effect it them value.

In order to behind extend this analysis in the time to the reopening of the securities market in 1914, the relative relation between JE is studied, from 1914 to 1966, and the rest of the cubical structure.
Figure 5.15 extension a bidimensional rappresentazione of the squares that were introduced in sequence between 1914 and 1966. Square JA represents a facade of the cube that was revealed before the beginning of the cube shown on Diagram V.B. This complete cubical structure will be explained in the following sections; but for hour, he is sufficient to know that the action price - time in the three dimensions ruotava along the plan defined from AB, which it can be visualized in Figure 5.15 seeing square JA folded in the observation page. Since the bidimensional diagram price - time had already recorded square JA when the cube ruotava, the diagram represents an open cube.
BD is the length of the side of the great squares in Figure 5.15 and are equivalent to 891. Therefore, the length of JE is given from the square root of **TEN** times the side of the square, 891. That is;

Theoretical value of JE = BD x √ 10 = 891 x √ 10 = 2818.

Table 4.2 have shown the present value them of JE to be 2832, producing an error from the calculated ideal theoretical value over of;

$$\frac{2832 - 2818}{2832} = \frac{14}{2832} = 0,49\%$$

The relation of the square root of ten has been previously explained like the multiplied square root of two for the square root of five. It represents also the diagonal of three adjacent squares. This relation was shown in Figure 5.2.b between EF and the length of the side of squared more small during that interval (that is, 200 x √ 10 = 632).
In order to verify beyond the relation defined over between the squares in Figure 5.15, the relationship between JE and BE must be shown to be the square root of two. That is;

Theoretical value of JE = BE x √ 2 = 1998 x √ 2 = 2825,6

Since the present value them for JE was 2832, the error between it puts into effect them value and the calculated ideal theoretical value over is;

$$\frac{2832 - 2825,6}{2832} = \frac{6,4}{2832} = 0,22\%$$

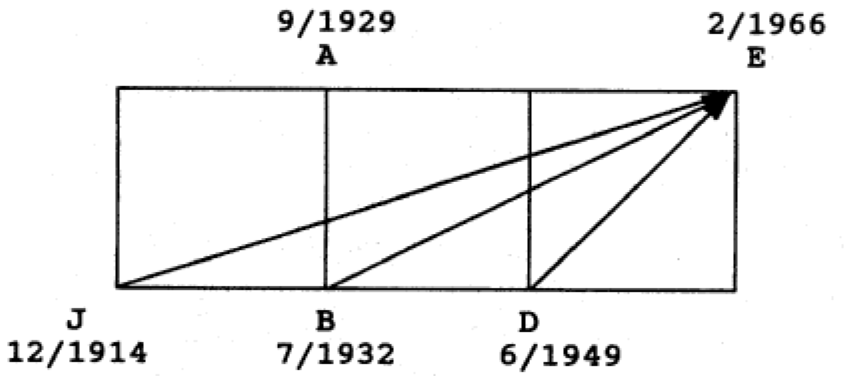


Figure 5.15
Bidimensional Rappresentazione of the squares forms to you in the DJIA from 1914 to 1966.

SUMMARY OF THE THREE-DIMENSIONAL STRUCTURES OF THE SECURITIES MARKET.

Figure 5.14 have shown the three-dimensional characteristics of two cubes mail next to every other with a face in common. This figure was overlapped on the graphical price - time of the securities market in order to show the three-dimensional configuration between 1914 and 1966. Vectorial values (PTV) were calculate to you between the points on Diagram V.B in order to show that the relative relations between these PTV were the same ones like for the dimensions of Figure 5.14. Calculating these PTV and the relationships between of they, the action was shown that price - time on Diagram V.B takes the shown three-dimensional shape in Figure 5.14. Everyone of the relationships calculates in this section came to an agreement the ideal theoretical values within a point percentage to you! This is very within the reliability of the data records and excludes the possibility to you of the coincidence.

CUBICAL STRUCTURES QUADRIDIMENSIONALI IN THE DJIA

While the demonstrated three-dimensional perspective in the previous section can be seen on the bidimensional diagrams price - time, does not represent just the true configuration that is schiudendo in the price - time. The three-dimensional structure is visible single because of the used techniques in order to record the data on the diagrams price - time bidimensional.

In order to comprise totally the true nature of the price - time, it must be understood that,

The GEOMETRIC STRUCTURE DEFINING The SPECIAL RELATION BETWEEN the POINTS OF FORCE In the PRICE - E' TIME IN MOTION Regarding the DIMENSION Of the PERCEPTION Of the MAN.

This initially it can play complicated. However, all that really means that solid geometric defining the points of carried out of along term in the securities market act like a cube that wheel. This appearance of spin is caused from the roteante nature of the conical propeller containing the structure.

As an example, the previous section has extension two adjacent cubes overlapped on the price - time between 1929 and 1966. However, **IT PUTS INTO EFFECT THEM STRUCTURE GEOMETRIC THAT IT WAS OPENED BETWEEN 1899 AND 1982 WERE A SINGLE CUBE.** The point on Figure 5.14 where it seems that the action price - time same moving itself from a cube to that adjacent one is currently the point in the price - time where the cube roteava in order to expose its successive face. This happened in 1949. In the quadridimensionale truth, DE not movements towards a different cube. Rather, it crossed the face of the cube that is represented from square DF.

It remembers, the bidimensional diagrams price - time records only the data that they succeed to that particular moment in the time. The face of the geometric structure that is found in the future is hidden from the sight. For more, the faces of the structure that have been previously indicated, are schiuse on a bidimensional plan, while the data are record day to you for day. To the beginning, the fact that the cube is roteando in the vision can create rising of confusion for like is seen the diagrams bidimensional, but this concept will become more clearly when more in here will be explained in Lesson X, **ASPECTS DETERMINE THE PROPORTIONS THEM OF THE TIME.** Like it is the case with the greater part of the new concepts, more time is passed to study graphical the more luminosity will become the concept.

The conical propeller is expanded as it grows. And since the faces of the cube are exposed while the rotea conical propeller, follows that also the squares that define these cubes expand. This explains the increase in the seen levels of energy as the time progresses. The process of every increase to particular level of energy is complete when the six faces of the cube are completed. After that the cube is complete, the increase proceeds to the following cube, that it is stacked on the top of the cube as soon as completed. This effectively creates a formation similar to a pyramid with every cube that it succeeds larger of the previous one, like defined from the conical propeller that is expanded. This was seen in 1949 when the smaller cube 1899 - 1949 finished and increased the level of energy in order to complete cube 1899 -- 1982, **THAT IT CONTAINED CUBE 1899 - 1949.** Therefore, the squares that define the cube from 1899 to the 1982 were larger of the squares that defined cube 1899 - 1949. Similarly, the squares of the cube from 1899 to the 1982 were smaller of the cube currently under construction (after the increase of the level of energy in 1982).

The fact that the cubes, than were developed to the higher levels of energy, composed of are squared that they are larger of the squares of cubes develops to lower levels of energy must be held to mind, because the following figures will show of the cubes pile up to you that they appear to be the same measure. However, these cubes were design to you in this way only in order to show the likeness of structures to the various levels of energy.

The six faces of the cubical structure from 1899 to the 1982 are shown in Figure 5.16. These squares individually were described in Figures 5.4 and 5.5 and are shown on Diagram V.H. When watched this figure, remembered that the PTV representative a square is designed like one line. As an example, the PTV from 1899 to 1914 is designed like one line to one dimension. However, this PTV defines the square that is the inferior part of the cube in Figure 5.16. This explains because 1932 are shown two times on this figure. That is, the reduction from 1929 to 1932 completed the entire posterior square of the cube in Figure 5.16.

The six squared that they define the faces of the cubical structure in Figure 5.16 are like follow:
Face #1 1899 - 1914 inferior part of the cube
Face #2 1914 - 1929 make right of the cube. It was crossed diagonally
Face #3 1929 - 1932 make posterior of the cube. It decreased from the top to the base of the cube.
Face #4 1932 - 1949 make left of the cube. It was crossed laterally.
Face #5 1949 - 1966 make of forehead of the cube. It was crossed diagonally.
Face #6 1966 - 1982 top of the cube. It was crossed laterally.

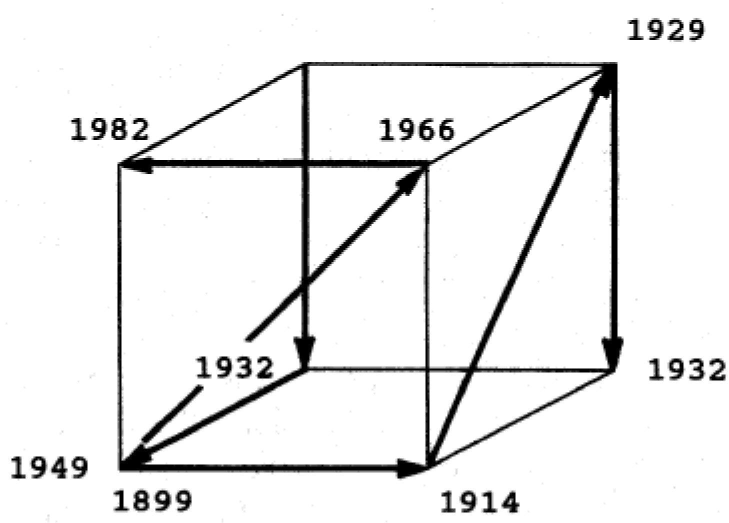


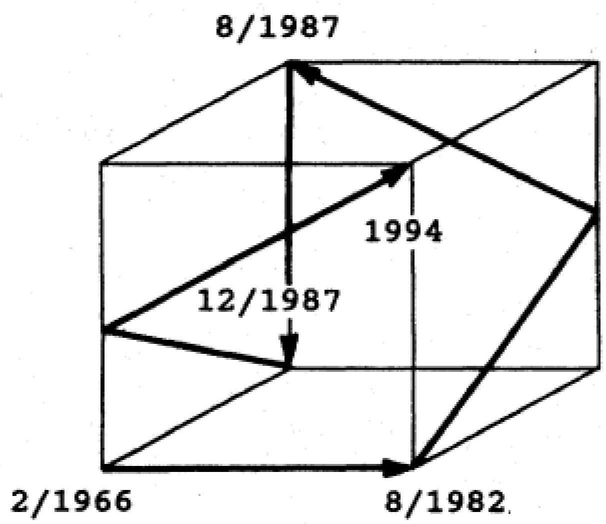
Figure 5.16
Cubical quadridimensionale structure of the DJIA between 1899 and 1982.

CUBICAL STRUCTURE CURRENT QUADRIDIMENSIONALE OF THE DJIA

To the age of this work (September 1993) they are schiuse five faces of the cubical structure from February 1966 today, like shown in Figure 5.17. The five squared that they define the faces of this structure are described under. You make reference Figure 5.5 for one description detailed of every squared.

- Face # 1 1966 - 1982 have formed the bottom of the cube. Its dimension was defined from its position like top of cube 1899 - 1982.
- Faces # 2, #3 8/1982 - 8/1987 skillful Faccia and makes posterior of the cube. These two squared were cross to you diagonally. Like previously shown, the PTV representative these two squared is √ 5 x base 1966 - 1982. That is, √ 5 x 891 = 1994. These two squared compose a single one squared on the greater cube that contains this smaller cube.
- Faces # 4, #5 3/1988 - today left Face and of the cube. These two squared are in order to be diagonally cross, as it they were faces 2, 3 to you. These two squared compose a single one squared on the greater cube that contains this smaller cube.

Figure 5.17
Quadridimensionale cubical structure of the DJIA from the 2/1966 to the present.

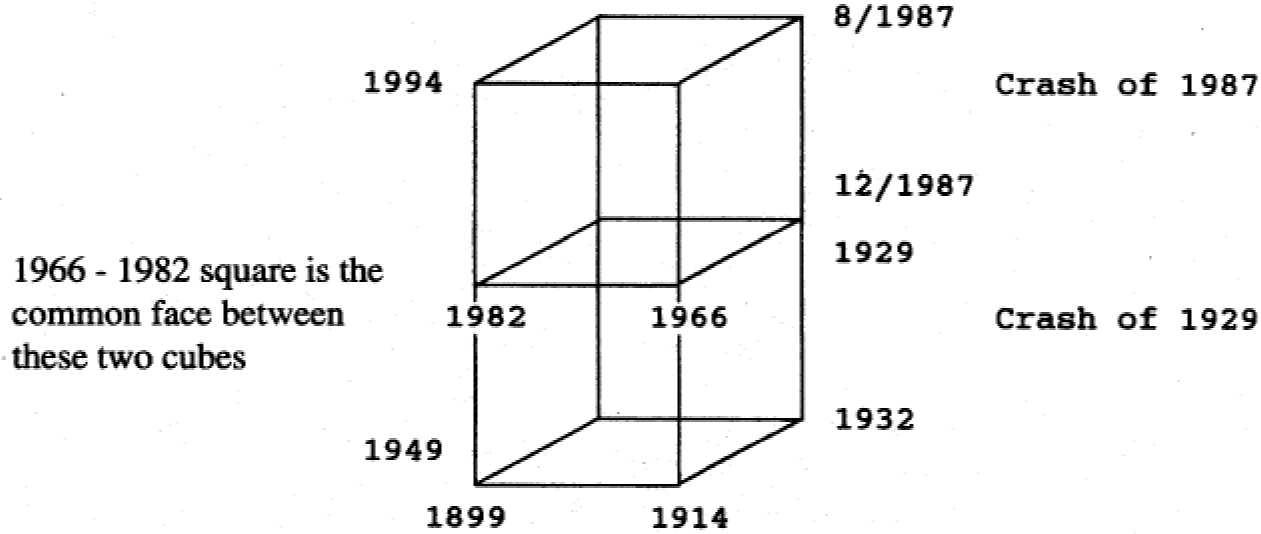


Every squared in this cube it is to a higher level of energy of its controparte in the previous cube. Therefore, the two squared from 1982 to 1987 in Figure 5.17 compose a single one squared in a greater cube that contains the cube shown in Figure 5.17. Similarly, the two squared that they are cross to you running compose an other single one squared on this greater cube. When this greater square is complete (in expiration in January 1994 as explained in part II of this course), three faces of the greater cube will be complete; that is square 1966 - 1982, square 1982 - 1987, and square 1988 - 1994.
That is similar to period 1914 - 1929 where two smaller squares were cross to you diagonally in order to define a greater square. Also everyone of squares 1899 - 1914 and 1932 - 1949 contained two smaller squares, that they defined the faces of cube 1899 - 1949.

GEOMETRY OF THE OVERLAPPING CUBES

The square from 1899 to 1914 was crossed laterally, similar to the square from 1966 to 1982. Both these squares represent the base of a cube. The square from 1966 to 1982 was not only the advanced part of the cube from 1899, but also the inferior part of a new cube that extends today from 1966. In other

words, the square from 1966 to 1982 was a common face between two overlapping cubes. That is shown in Figure 5.18.
Not to be confused because the cube up extension the faces turned upside down regarding those in Figure 5.17. The two figures show the same cube. A figure sees the cube from the front part and the other sees it from the posterior part. This can be verified designing Figure 5.17 on a paper piece, then turning the paper and watching the cube from the other face.
Square 1966 - 1982



it is the common face between
these two cubes

Figure 5.18

Two cubes stack to you in the DJIA from 1899 today that they show square 1966 - 1982 as make common.
Famous that both landslides of 1987 and the 1929 happened to the same positions on the two cubes. These given corresponded with before the time that the action price - time caught up the apex of the cube in construction course.

SIMILAR MODELS FORM ON CORRESPONDENTS FACES OF THE CUBES

When two squared form on faces correspondents of two different cubes, the action price - time within these squares is much similar one. As an example, Diagram V.C extension three diagrams salaries on the securities market. The diagram more low is one complete recording from 1790 to 1993. Also the means diagram is of the securities market, but shunting line of 67 years regarding the below diagram has one. That is, the dates of the means diagram are placed directly over the dates of the 67 previous years on the diagram low. Continuous the advanced diagram this process with moving this diagram of 67 years regarding the intermediate diagram. It observes as the dates begin them of these three diagrams; 1790, 1857 and 1924 corresponded with the points begin them of some of the greatest rises than price in the history. reason of the choice of the movement of the 67 years will be explained in Part II of this course, where this period will be shown to correspond with one of the greater cycles of the securities market. The cubical structures schiuse during everyone of these periods of time are to of the similar points of development, but to different levels of energy. The shown cubical structure in Figure 5.16 are begun in 1899. Sessantasette years after, in 1966, the shown cubical structure in Figure 5.17 began to manifest themselves.
In order to verify that similar models price - time happens along square correspondents of different cubes, the sections of Diagram V.C is widened for one vision gives near. Diagram V.D confronta un periodo di 67 anni fra il 1869 1935 con il periodo immediatamente seguente, 1935 oggi. These two diagrams are much similar with the exception of the two cycles of five years in 1891 and 1916 that correspondents refolded with greater energy in the inferior diagram of theirs cycles on the advanced

diagram, that is 1958 and 1983. The position of the cycle greater than 84 years explains because there was more energy in the periods of 1958 and of 1983. This will be explained in Lesson VIII.
Diagrams V.And and V.F correspondents supply a detailed vision more than these sections of the market, with periods of twenty years design to you on the same diagram. Diagram V.And it compares the two periods between 1896 - 1915 and 1964 - 1983. Both these sections contain the squares described in the previous section as you leave inferior of their you respect cubes to you. Similarly, both represent the top of different cubes, like described in the section on the overlapping cubes. In that section square 1966 - 1982 was explained that it was the inferior part of the running schiudente cube, and the top of the cube formed between 1899 - 1982.
The square between 1899 - 1914 it was not only the inferior part of cube 1899 - 1982, but also a common face shared with the cube formed before 1899.
Since square 1966 - 1982 it is the top of the cube originated in 1899, and square 1899 - 1914 is the inferior part of the same cube, Diagram V.And extension the apex and the bottom of this same cube.
Similarly, Diagram V.F confronts two periods of twenty years between 1870 - 1890 and 1935 - 1954.
The reader is encouraged to continue this process and to confront the models price - time on correspondents squared in different cubes. The vision of along term is available on Diagram V.C. When similar sections are identified they can be confronted more carefully on Diagrams XI.To until the XI.G.

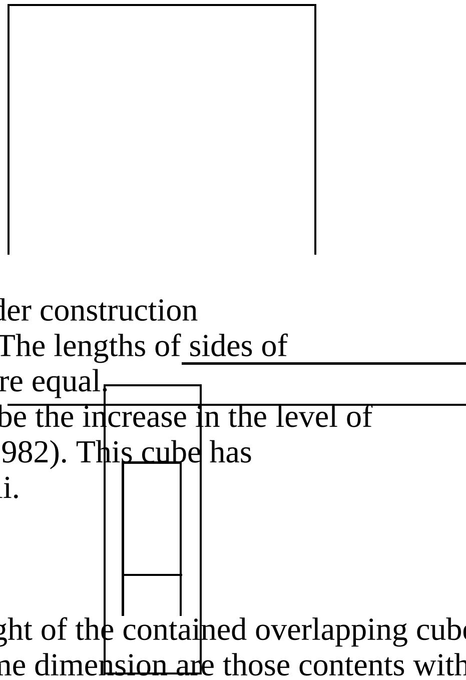
The THEORY Of the CHAOS And the FRATTALI In the SECURITIES MARKET

This argument is put in program for being included in according to volume of this course. Therefore, short vision of together will be only supplied one.
The theory of the chaos is the name given to one new relatively new area of study in modern physics. The origin of the theory of the chaos was in 1961 when a scientist to the MIT, Edward Lorenz, tried to create of the mathematical models to us in order to improve the forecasts of the time. I details of the theory of the chaos are available from many good books on the argument.

The specific area of the theory of the called chaos **FRATTALI** scientist of IBM of name Benoit Mandelbrot was studied from one. Fratta them division "of one is one" great structure in smaller structures. These smaller structures, the fratta one them, have aspects similar to the greater structures. This theory asserts that if fratta is magnified them to the dimension of the greater structure the fratta one them it appears like the greater structure.
This theory would not have to be a innovation for the students of the theory of the waves of Elliott, that it applies the model of waves 5 - 3 of the waves of Elliott to the models of the different financial market largeness.
In application, the fratta one they are used them in order to make of the models of increase of natural objects, like the ferns, with not linear geometry. The concept of fratta them is not new. As it was demonstrated previously in this lesson, the diagonal of the square is used in order to define the base of the successive phase of greater increase, that it is also contained within a square.
Examples of fratta them in the securities market can be seen confronting the diagram weekly magazine between 1966 and 1982 with the shown every day diagram on Diagram I.To. The lengths of the PTV on Diagram I.To they were found to be equivalent to 237 when a hour temporal member for the carriers uses itself. Similarly, the length of the PTV combining the minimums on Diagram XI.K is 237 when a member uses itself weekly magazine of the time. This demonstrates also the limitations of the contemporary cyclical analysis. During square 1966 - 1982 the analysts were incapable to find the "defining cycle" the minimums of market. That is for the fact that the time between these minimums varied very. However, **The COMBINING PTV THESE MINIMUMS WERE ALL OF EQUAL LENGTH.** Once again, an analysis to a dimension was demonstrated insufficient.
An other example of fratta them on Diagram XI.K is seen multiplying the value of 237 for these PTV for the square root of five. This value (529) defined the PTV from the minimum of 1982 to the maximum of 1984. Therefore, the relation between two PTV, 1978 - 1982 and 1982 - 1984 is defined from the square root of five, like is the relation between the two larger PTV, 1966 - 1982 and 1982 - 1987.

SUMMARY

This concludes the Part of the course. tempismo instruments introduce end to you here will be hour shortly reassumed.
The action price - time is defined within the limits of force points. The relative distance between these points can be measured on a bidimensional plan with the beams carriers. The length of these carriers (PTV) is independent from the direction. If they straight aim low the straight axis of the time or up in the price, their length is constant. If the market is experiencing a vertical movement the analyst can project the point finishes them of that movement measuring the vectorial length from the origin of the movement. If a powerful movement is in travel the length of the carrier happens in multiples, more commonly two times, then four times. Similarly, the analyst can use the same technique in order to project the final date of a variable lateral market where the dominant member of the carrier is the time.
The triangle is the geometric shape of base on which other structures are based. All the geometric formations that happen **NATURALLY** the triangle and the circle can be constructed with. In the case of the securities market, two carriers are connected in order to create an equilateral triangle. Therefore the analyst not only knows in advance payment the length of the movement in course, but also the direction of that movement, specifically 60° from its joined PTV. The measure of these equilateral triangles on a every day diagram leaves the analyst easy to project the points finishes them of the movements within two days of market.
The angle within the formula of the water was shown to have from the tetrahedral ideal angle of five degrees. This shunting line is caused from two seems of Ionian electrons in the water. This phenomenon was explained since the DJIA esperimenta a similar movement. If the angles are measured within the triangles in the DJIA their exact value it will be found to be between 62° and 63°. This difference of two degrees within the faces of the triangles of the DJIA is caused from the movement within the inner angle of the three-dimensional tetrahedron.
In the case of the securities market, two seen equilateral triangles on a graphical price - bidimensional time composes a three-dimensional tetrahedron. This tetrahedron is schiuso as well as the diagrams price - time sequenzialmente how much records the faces they is introduced. If an other various market from the share one is studied, the formed compound will not be necessarily tetrahedral. However, the triangle will be still the base structure on which constructing. Rather than the tetrahedral shape, the compound can be an octahedron, a dodecahedron, icosahedron, or some other shape that depends gives it specific reticulum of that market.
The tetrahedron is a solid "cube - centered", that it means that can be placed symmetricalally within a cube. The cubical structure in the securities market between 1899 and 1982 carefully was analyzed, and was made of the measures detailed of every face of this cube verifying its shape.
Included within this greater cube there was the smaller cube with extension from 1899 to 1949. This can be seen in Figure 5.19 where the smaller cube (b) is cube 1899 - 1949. Two faces of this small cube were found to fill up a face of cube greater (C). When the smaller cube was completed in 1949 also the quarter makes of the greater cube (c) was completed. The length of this quarter makes, that it extended from 1932 to 1949, was found to be equivalent to 891. This value was the length of the top of cube greater (C). The top of C extended from 1966 to 1982. The four faces of the greater cube (c) were found to be progressively increasing in the dimension like the smaller cube schiudeva. As an example, square 1899 - 1914 it was leggermente more small of square 1914 - 1929, than to its turn was smaller of square 1932 - 1949. The increase in the length of facade of the greater cube was caused from the expansion of the conical propeller. It is the smaller cube (1899 - 1949) that it is contained within the greater cube that has the length of the constant facade. When the smaller cube was completed in the 1949 was an increase in the levels of energy like the fifth face of the greater cube was crossed diagonally in order to catch up its maximum.
The result of this process is that one of a cube stacked on the top of an other cube, like shown in Figure 5.19. The cube on the top is enclosed within a greater cube. This greater cube has an other cube stacked on its top. The cube on the summit of this greater cube in its turn will be contained within a cube still greater. This process of continuous increase, to the infinite, until when the increase finishes.



And
Cube running under construction
(1966 - present). The lengths of sides of
D these squares are equal.
C the defining cube the increase in the level of
Energy, (1899 - 1982). This cube has
B square diseguali.

To
Figure 5.19
Bidimensional sight of the contained overlapping cubes within other cubes. The cubes with the squares that are of the same dimension are those contents within the greater cubes. The containing cubes these smaller cubes composed than are squared that they are expanded in order to repair the conical propeller that is expanded. The two cubes center them in this figure (C and D) are those from Figure 5.18. The smaller cube (b) is that from Figure 5.4.

The acquaintance of the geometric structure allows the analyst to identify its position within the process of increase to every point in time. After that the face of the structure has been identified, the limits of that face can be calculate to you and defined from the PTV. It is within the bidimensional faces of the structure that can be carried out the creation of takes care of cyclical models to you.

Part II will study i recurrent cycles along the faces of the identified cubical structure in Part I. The limits of recurrence of these cycles are defined from the bidimensional face of the structure.

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[1]
The documentations limited during this time rendered impossible to attribute to Lao Tzu the entire work of *Tao You Ching*, than literally it is translate as "Classic of the way and power". The contemporary thought is that other authors contributed to this job during a period of time. Lao Tzu, whose name means "Old Master" originated the philosophy of the Taoismo.

[2]
Sacred Geometry.

[3]
Since the squared side of the new one is the square root of two, of it derives that the squared area of the new one is two. The area of a square is simply the square of the side. The multiplied square root of two for if same is two.

[4]
This is the base of the angle of diagonal 1 x 2 of Gann. It is the diagonal of two adjacent squares. Like shown under in Figure 5.2.to, the square root of five is the PTV that defines this geometric structure.

[5]
The length of EF is the square root of ten times the side of one of the smaller squares. That is, EF = $\sqrt{10} \times 200 = 632$. The square root of ten was explained in Lesson IV, I RELATIONSHIPS PRICE - IMPORTANT TIME PIU' OF FIBONACCI, like the multiplied square root of two for the square root of five. Geometrically, this is represented from one rectangle 3 x 1, like shown in Figure 5.2.b.

[6]
The G Appendix supplies a more rigorous look to the spiral of increase that has defined the squares forms to you between 1921 and 1932. the reader recommends to consult that material to this point.

[7]
It confronts Figure 5.5 with Figure 3.4, that showed two rectangles 3x2 to different head in the increase process.

[8]
The pentagon is not the intention to make some expected mystic care, rather than to supply a short history of its use. This job only is interested with what verifiable and it is easy demonstrated in nature and therefore, in the financial markets.
[9]
The coupled ellipses were described in Lesson II, the ELLIPTIC NATURE Of the PRICE - TIME.
[10]
Methane supplies the better example than a chemical compound that assumes nearly the perfect tetrahedral shape.
[11]
The PTV, DE, are the diagonal of the square that ruotava in the vision in 1949. Like mentioned in Lesson II, **INCREASE MODELS**, the diagonal of a square defines the angle of 45° of Gann. The exact angle of DE is given from the trigonometrical relation;

$$\tan^{-1} \frac{840 \text{ points}}{869 \text{ weeks}} = 44^{\circ}$$

This angle supplied the support from 1949 until the breach in 1962. Between 1962 and 1966 this same angle of 45° supplied the resistance until was caught up the nodal point in 1966.