Dynamic Time and Price Analysis of Market Trends

By
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Advanced technical analysis
methods and techniques

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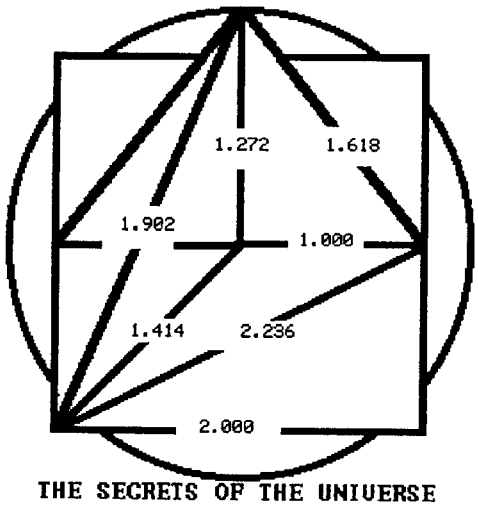
1
Sacred Geometry

Time & Price Analysis of Market Trends is a mathematical approach for comparing the relationships between market highs and lows in both time and price amplitude.

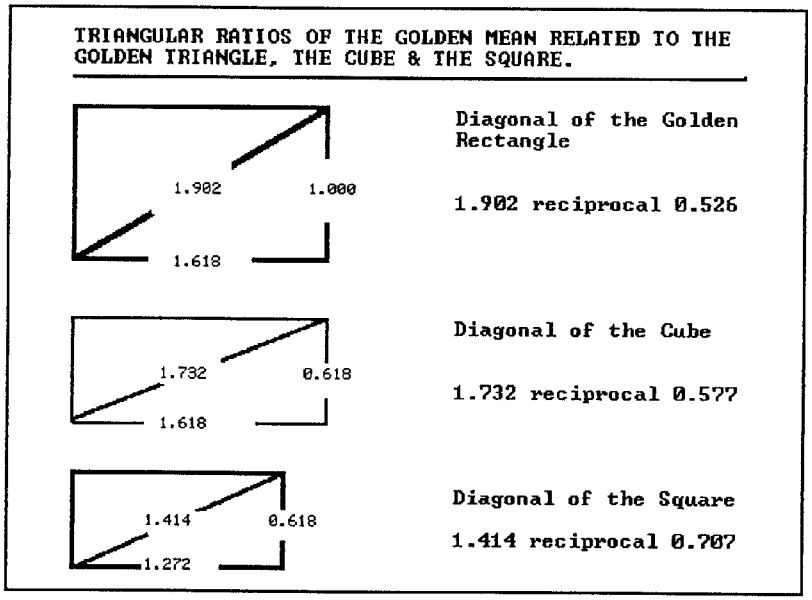
Teachers in the centers of education throughout the ancient world, such as those founded by PYTHAGORAS & PLATO set their pupils to practice the arts of DYNAMIC GEOMETRY and NUMEROLOGY in order to exercise the faculty of intuition.

The ancients taught that any situation in life may be represented by a DYNAMIC PATTERN for which there exists a precedent in nature. GEOMETRY deals with pure form, philosophical geometry re-enacts the unfolding of each form out of the preceding one.

The ancients devised a canon of proportion. The canon demonstrates the squaring of the circle and the binding relationships between the SQUARE, CIRCLE & the GOLDEN MEAN. The circumference of the CIRCLE is equal to the PERIMETER of the SQUARE.



Using Geometry we can prove the ratio 1.618 maintains a triangular relationship with the square, the cube and the circle. This association is extremely important for our purposes because all Geometric forms must rotate from one axis to another if they are to continue too relate in the future.



1.414 **The diagonal of the SQUARE**

1.732 **The diagonal of the CUBE**

The key **geometric** ratios for Time and Price analysis purposes are:-

EXPANDING GEOMETRIC RATIO SERIES =

1.000 **1.272** **1.618** **2.058** **2.618** **3.33**

CONTRACTING GEOMETRIC RATIO SERIES =

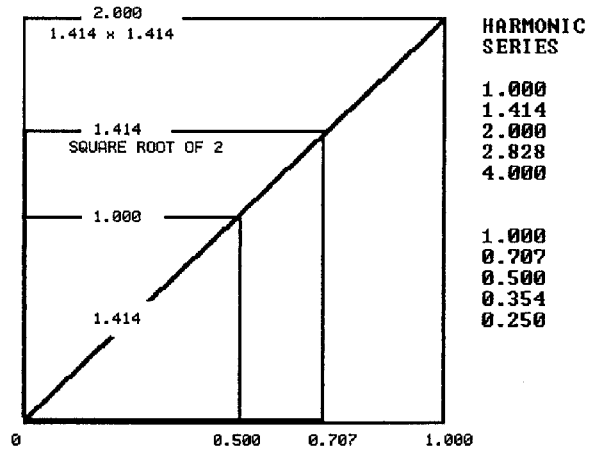
0.786 **0.618** **0.486** **0.382** **0.300** **0.236**

Harmonic Ratio Series of the SQUARE

HARMONIC RATIOS are generated from the diagonal relationships found within the SQUARE. Musical notes vibrate on ratios of the square. HARMONIC RATIOS relate to the number 2 and square root of 2.

SQUARE ROOT OF 2 = 1.4142 **SACRED CUT = 0.707**

The Sacred Cut 0.7071 is equally as important as 0.618 when dealing with proportion. Later on we will see how the two ratios integrate the unfolding geometry within a markets structure.



HARMONIC PROPORTIONS FORMED BY THE SQUARE

W.D. Gann is famous for his use of the ratios in the square and the cube in his analysis of time and price in market trends.

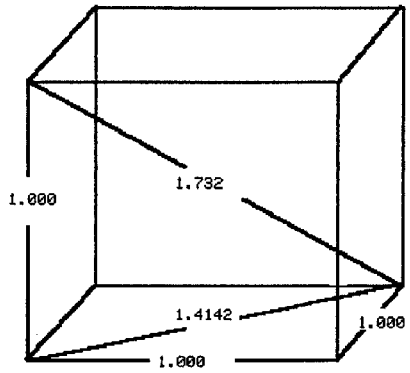
EXPANDING HARMONIC SERIES =
1.000, 1.4142, 2.000, 2.828, 4.000, 5.656

CONTRACTING HARMONIC SERIES =
1.000, 0.7071, 0.500, 0.354, 0.250, 0.177

Third Dimension of the Square

The diagonal of the cube can be used to form a ratio series that continues to hold its pure geometric form in a similar manner to the geometric and harmonic ratio series.

SQUARE ROOT OF 3 = 1.732 **RECIPROCAL = 0.577**



THIRD DIMENSION
OF THE SQUARE

PRODUCES RATIOS

1.000
1.414
1.732

1.000
0.707
0.577

DIAGONAL OF THE CUBE = 1.732
RECIPROCAL OF 1.732 = 0.577

If you review the diagrams on 1-3 you will see how the square root of 3 also can relate to the geometric ratios 1.618 and 0.618 and the square root of 2 relates via the square root of 1.618 (1.272).

The system of ratio relationships evolves in a strict manner and leaves nothing to chance.

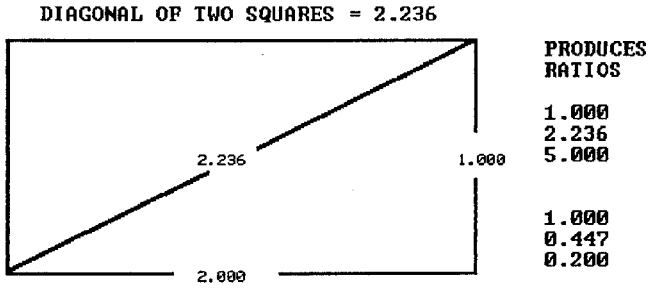
EXPANDING 3rd Dimension HARMONIC SERIES =
1.000, 1.732, 3.000, 5.2, 9.000

CONTRACTING 3rd Dimension HARMONIC SERIES =
1.000, 0.577, 0.333, 0.192, 0.111

The 4th Dimension of the Square

The diagonal of 2 squares, ie., a rectangle with a side 2 and a height of 1.

SQUARE ROOT OF 5 = 2.236 RECIPROCAL = 0.447



An interesting relationship of root 5 is:- 2.236 = 1.618 + 0.618

Arithmetic Ratios

ARITHMETIC RATIOS are generated from the simple division of whole numbers by other whole numbers. A few examples are listed below.

2/3 = 0.667 3/4 = 0.75 7/8 = 0.875 3/2 = 1.500

Arithmetic ratios will play a part in the construction between the major cardinal ratios.

If you wish to make a complete study of these ratios and their origins I would recommend the book **SACRED GEOMETRY** by Robert Lawlor, published by THAMES & HUDSON.

Cardinal Ratios in Geometry

To summarise this introduction to Sacred Geometry, the most important geometric ratio is:- **1.000**

After which come the Cardinal ratios, Rhythm ratios and then the Arithmetic ratios.

The Cardinal ratios of contracting and expanding forms are:-

Contracting					
0.333	**0.447**	**0.500**	**0.577**	**0.618**	**0.707**
Expanding					
3.000	**2.236**	**2.000**	**1.732**	**1.618**	**1.414**

Rhythm ratios are:-

Golden Mean					
Contracting	0.236	0.300	0.486	0.618	0.786
Expanding	1.272	1.618	2.058	2.618	3.33
Square					
Contracting	0.177	0.250	0.354	0.500	0.707
Expanding	1.414	2.000	2.828	4.000	5.656
Cube					
Contracting	0.111	0.192	0.333	0.577	
Expanding	1.732	3.000	5.2	9.000	
Rectangle					
Contracting	0.200	0.447			
Expanding	2.236	5.000			

These ratios and their origins need to become second nature to the Time and Price Analyst.

2

Introduction to Time & Price

Time and price analysis requires the use of charts to plot the price history of a market or index. Charts have two dimensions, the horizontal for TIME and the vertical for PRICE.

A chart is like a road map to a technical analyst. It provides us with a pictorial view of the markets past activity. By analysing the past we can learn the characteristics and habits of a market.

TIME & PRICE ANALYSIS is about identifying the market price levels where support or resistance is likely to eventuate.

Price support & resistance levels can be determined mathematically using the past price activity.

Each individual market will develop its own CYCLES. These cycles will relate to future time duration between market highs and lows.

The future is just a repetition of the past in another geometric form.

Price highs and lows, prior bull market and bear trends, will relate geometrically to each other in TIME & PRICE. Often they will relate in very simple ratios, other times they can be quite complicated to recognise, unless you can understand the intricacies of the geometric forms.

It is the purpose of this manual, to provide you with a complete knowledge of the tools available, to recognise when a market has reached a support price or a resistance price.
With this knowledge you will know when it is opportune to buy or sell.

The tools and methodologies I will teach you are DYNAMIC in nature, that is why this manual is named:-

DYNAMIC TIME & PRICE ANALYSIS OF MARKET TRENDS

DYNAMIC - means comparing actual price and time and evaluating the proportional relationship.

The secret to becoming a professional technical analyst is to keep it simple. The more you complicate the issues, the harder it is to recognise the order between the unfolding patterns.

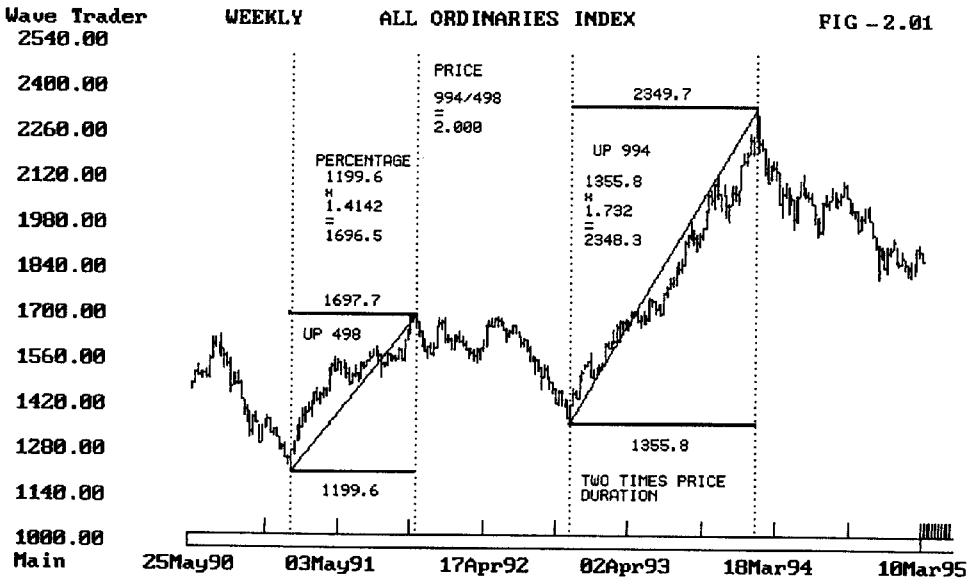
To get started, here is an actual example of PRICE which occurred in the Australian Share Market Index known as the ALL ORDINARIES INDEX.

There are three unmistakable instances of PRICE PROPORTION in this example for the expert and novice analyst to take note of:-

Price relationships of:-
2.000 1.4142 1.732

1. The price rise in each bull market related by a factor of 2.000.

In 1991 the bull market rose 498 points, between 1992 and 1994 the next bull market rose 994 points 2 points short of exactly twice.



2. The 1991 bull market rose from its low of 1199.6 by a factor of **1.4142**

1199.6 multiplied by the Square Root of 2 (1.4142) gave a target price of 1696.5

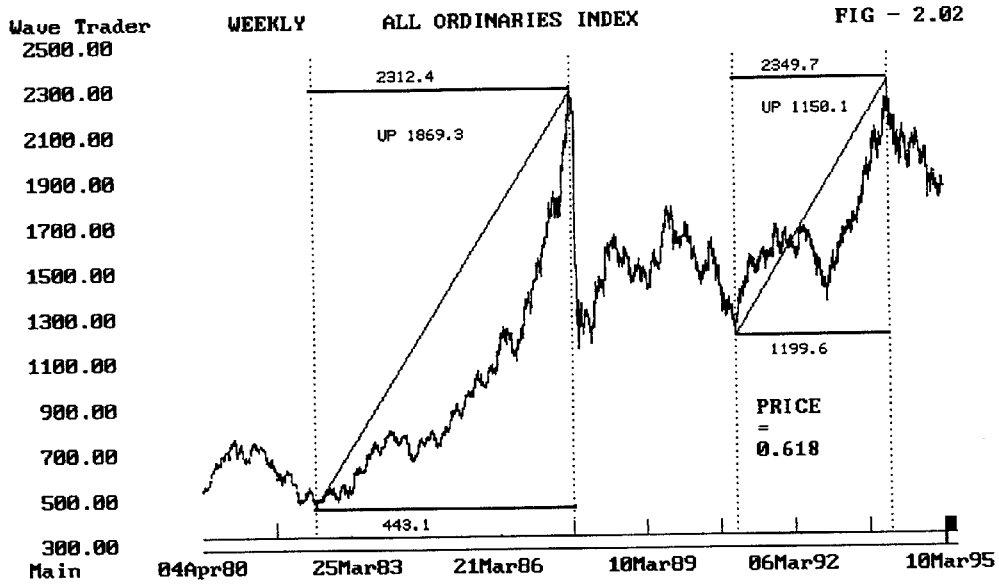
3. The 1992-94 bull market rose from its low of 1355.8 by a factor of **1.732**

1355.8 multiplied by the Square Root of 3 (1.732) gave a target price 2348.3

PRICE PROPORTION at the 1994 high was also evidenced in a much larger degree when compared to the 1982-87 range from the 1991 low.
The unfolding pattern of the 1991-1994 bull markets topped out as a proportion of the 1982-87 bull market on **0.618.**

The 1982-87 bull market rise was 1870 points (13 x 144), the total rise in points from the 1991 low to the 1994 high was 1150 points (8 x 144), ie., 8 - 13 = **0.618**

* Gann taught students to count off price increments in squares of 144 degrees of price and 144 degrees of time.



The first question I ask myself when I witness GEOMETRY of price ranges such as this is, "How could this activity be random"?

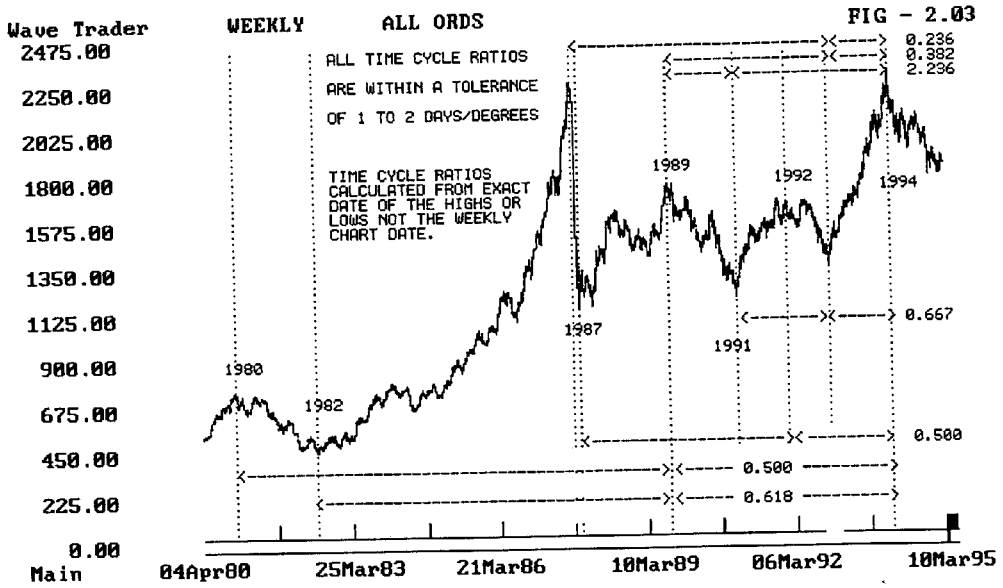
To be absolutely sure you are not looking at a random event you must confirm TIME has related in a degree which can be identified using the same principles.

When dealing with major market changes of trend there should be evidence of DYNAMIC RATIOS OF TIME between trend changes of similar degree.

TIME PROPORTION RELATIONSHIPS are often easier to monitor than price relationships. This is because time can only move on one axis whereas price relationships can be formed in either price units or percentage change relationships.

I have found after years of experience that TIME is the underlying reason why markets reverse trend. As Gann taught, "When time is up the trend must change."

R.N. ELLIOTT states in his theory, "All waves of similar degree will relate in TIME amplitude."



At first glance the TIME CYCLES illustrated in Fig 2.03 would appear quite complex to the novice analyst.

I like to keep things as simple as possible, so I look for relationships on major ratios such as 1.000, 1.618, 2.000, etc.,

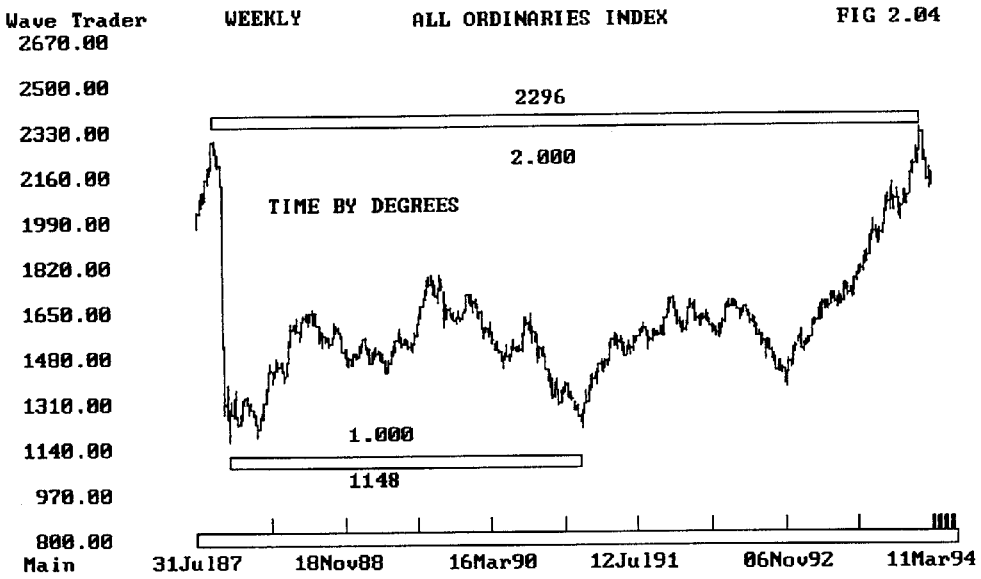
The evidence of CYCLES within markets can usually be seen easily with a little determination.

To illustrate this principle with the All Ordinaries Index high in 1994 I would look at the relationship between major lows and highs.
1987 was a major high - the date of the high was 21st September 1987.
1987 was a major low - the date of the low was 11th November 1987.
1991 was a major low - the date of the low was 17th January 1991.

The 1994 high date was 3rd February 1994.

The time from the 1987 low to the 1991 low was 1148 degrees - the time from the 1987 high to the 1994 high was 2296 degrees. Exactly 2.000 times.

The time in days was 1163 to 2327, 1 day over 2.000.



There is no purpose to be served by continuing these examples at this stage, it is more important for me to lay a foundation for you, so you would appreciate how important the observations were at the time they occurred.

What I hope I have pointed out so far are two things :-

1. Price ranges in trends are important to monitor.
.2. Time relationships between changes of trend are important.

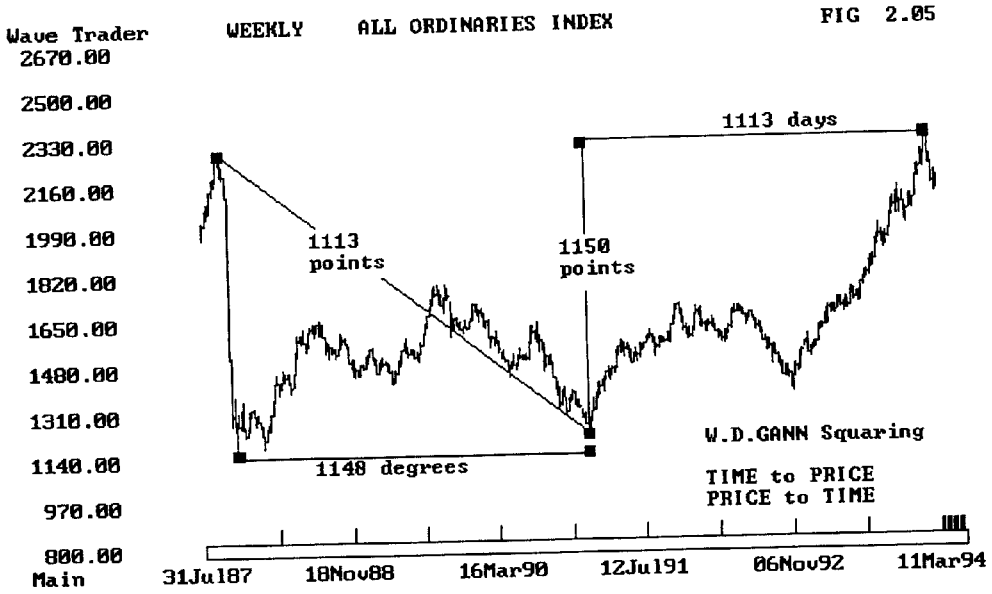
Each can be defined using the Canon of Proportion.

W.D. Gann

To complete this introduction to TIME & PRICE ANALYSIS it would be wise to mention W.D. Gann once more.

W.D. Gann believed that PRICE & TIME could be inter-related, ie., TIME could be compared to PRICE and PRICE could be compared to TIME.

Gann called this technique SQUARING TIME to PRICE and PRICE to TIME. For most markets it is not practicable yet there is a good example of this principle at the 1994 high in the All Ordinaries Index.



Conducting Time And Price Analysis

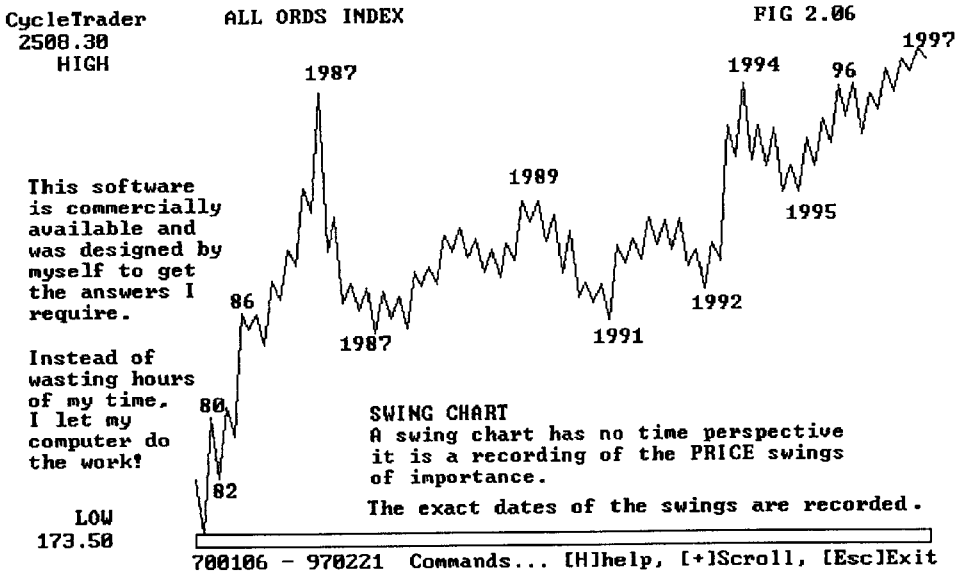
Can be time consuming to say the least, for years I struggled with ways to uncover the information I needed to know.
Finally I created an analysis package of my own design which allowed me to test and prove the principles I hold so true.

My requirement for TIME & PRICE ANALYSIS needs only the important dates and price levels where changes in trend of a tradeable nature have occurred.
For this I have created a simple SWING CHART system. Swing charts can be created in MINOR, INTERMEDIATE or MAJOR degree market swings.

SWING CHARTS also help eliminate the day to day noise from my analysis and keep my mind in perspective to the main trend.

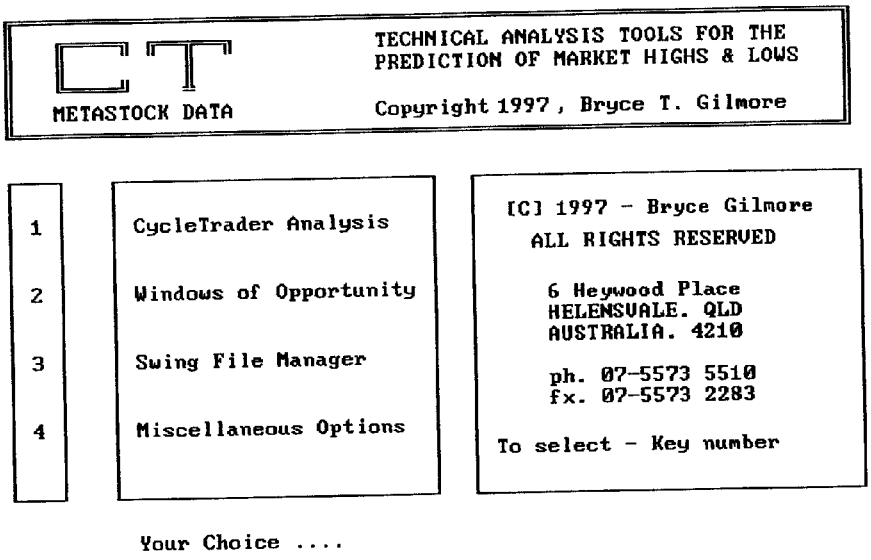
Most of the following examples of TIME and PRICE analysis will be demonstrated by my personal software CYCLETRADER. The routines I have developed automate the discovery process a trader needs to keep his mind on the job. It's no good to discover 3 weeks after a major change in trend things which could have influenced your opinion of the market.

Every trader needs technical information up to the minute if he is to control his emotions and move with the ebb and flow of the buyers and sellers.



A tradesman can only be as good as his tools, if you have the right tools, the right information on the subject at hand and a thorough knowledge of what you are doing, anything becomes easy.

I recommend you consider CYCLETRADER seriously if want to excel at understanding the TIME & PRICE relationships forever unfolding in all markets.



I have also authored 2 other books:-

Geometry of Markets [c] 1989
Geometry of Markets II [c] 1993

These cover my original research work into Elliott and Gann methodologies as well as my thoughts on how to implement a trading plan based on the technical analysis of TIME, PRICE, PATTERN & TREND INDICATORS.

3
Price Measuring Techniques

Measuring the proportional relationships between market trends (market highs to lows / and or / lows to highs) is the best way to begin with PRICE ANALYSIS using geometric pattern identification.

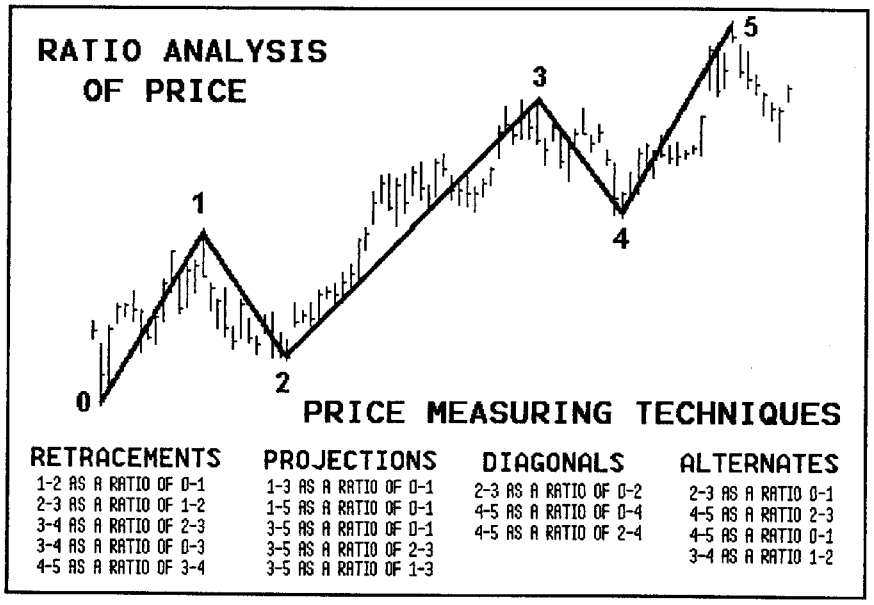
Relationships will form in several different ways :-

1. **Direct relationships.**

2. **Diagonal relationships.**

3. **Alternate relationships.**

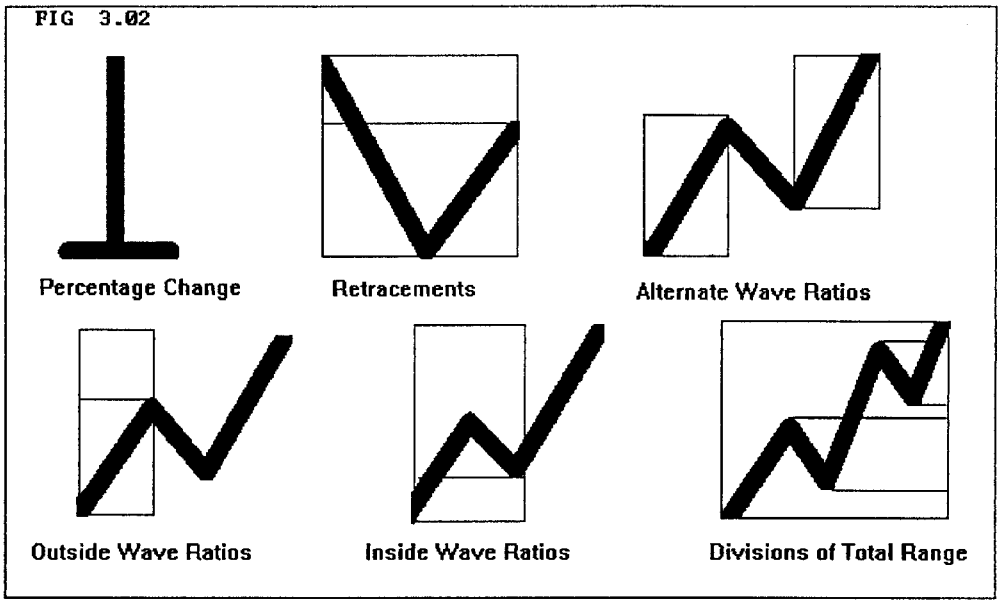
In each case we are comparing advances and declines as ratios to each other. The ratios in the square, cube or triangle. Occasionally relationships can be identified as relating to the circle.



Dynamic Price Relationships

The following diagrams are a guide to the way RATIO RELATIONSHIPS form within market trends.

Each future market move is working out a price relationship to the past. Sometimes the relationship will relate in price units, other times the relationship will relate in percentage change. When neither of these associations are apparent there will be a relationship between VIBRATION. We will discuss this form of price/time analysis later on.



R.N ELLIOTT states in his theory, "All waves of similar degree will relate in PRICE amplitude."

1. **PRICE UNITS**
2. **PERCENTAGE CHANGE**

In any completed trend it should be clear that PRICE has related by at least 2 different methods of comparison.

Direct Price Relationships

These are commonly known as price RETRACEMENTS. This is the first place to start with, mainly because this is the first introduction any chart reader gets to price analysis.

Ever since I can remember any technical analyst, I ever met, knew about price retracements. Mostly their knowledge was limited to simple relationships such as 38.2%, 50% & 61.8%.

For instance if a market rose in a bull trend 100 points, then reversed trend and found support 50 points below the high it would have made a 50% retracement.

Unfortunately for most traders and analysts, who have a limited knowledge of price retracements, the signalling for a reversal of trend depends on numerous other factors. These are :- the unfolding geometry of price & time. Analysts who trade 50% retracements without any other knowledge will lose money in the market 8 out of 10 times.

If you have been taught, to expect a reversal of trend at a retracement of 50% of the prior move, you will already be aware that trades taken at these levels have a 20% probability of success. Sometimes they work for a few days but then the market moves on and breaks the 50% support.

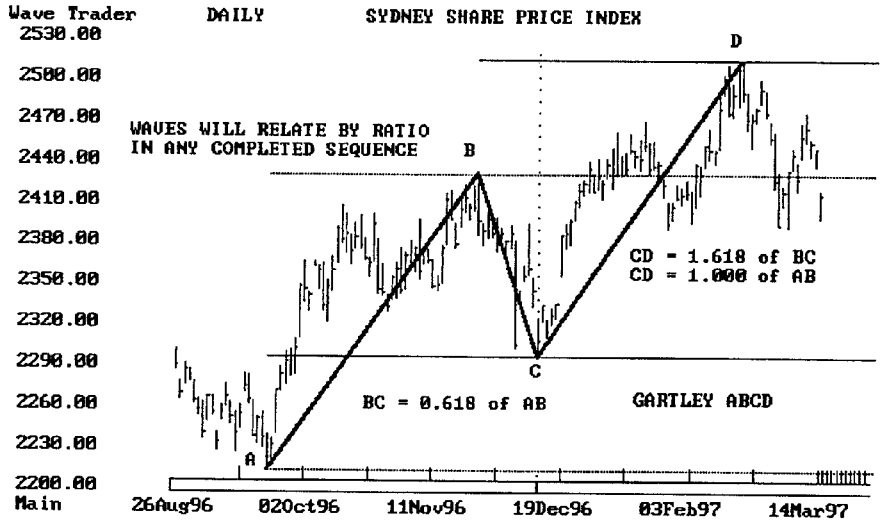


FIG. 3.03 DIRECT PRICE RELATIONSHIPS WITHIN MARKET TRENDS (ACTUAL)

Diagonal Price Relationships

These types of price relationships are 3rd dimensional in the context of the market movement.

It would be great if the only ratios were 0.382, 0.500 and 0.618, 1.000, 1.618, 2.000 but this is not the case in the real world!

Nevertheless the above ratios do signal changes in trend 33.3% of the time.

The market is a continuous spiral of activity. Price relationships between significant highs and lows oscillate from one series of ratios to another.

The best way to confirm PRICE is with two or more confirmations. As well as with the combination of TIME CYCLE analysis.

When the Sydney Futures Exchange contract for the Share Price Index - Futures contract for hedging the All Ordinaries Index - made high on 7th August 1995 at 2199 the PRICE relationships were working internally as well as externally.

A signal like this confirms the 0.707 retracement level of the 1994 Bear market as important.

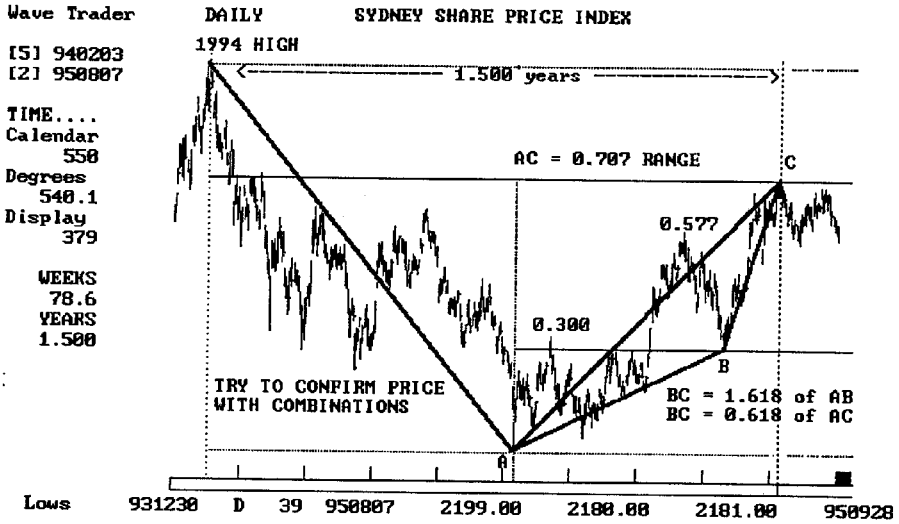


FIG. 3.04 DIAGONAL PRICE RELATIONSHIP COMBINED WITH A DIRECT PRICE

Alternate Price Relationships

These types of price relationships are also 3rd dimensional in the context of the market movement.

When time is up it will be confirmed by PRICE.

July 17th, 1996 the Sydney Share Price Index made low at 2086 on very strong TIME.
The points decline from the previous highest high in the bull market from 1994 was 50% (288) of the total points decline in the 1994 bear market (575).

Incidentally both values are on the Gann square of 144.
144, 288, 432, 576, 720, 864, 1008, 1152, 1296, 1440

This is impressive behaviour for a market which is considered "random" by most people I encounter outside of the technical world.

Sometimes the numbers in price ranges hold a special significance to certain markets. As far as this market is concerned the "square" of 144 appears and reappears time after time.

Other often repeated numbers are 72, 90, 180, 216, 224, 256, 512.

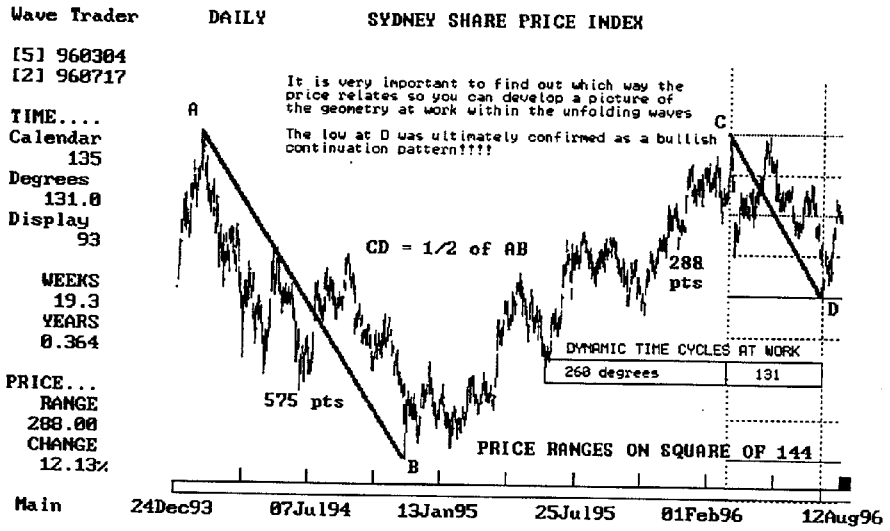
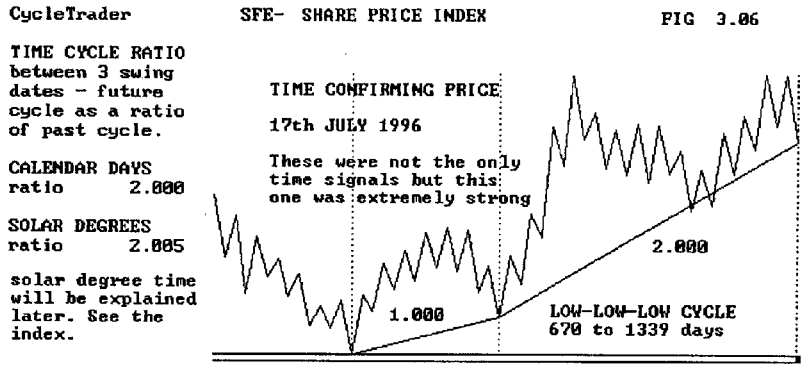
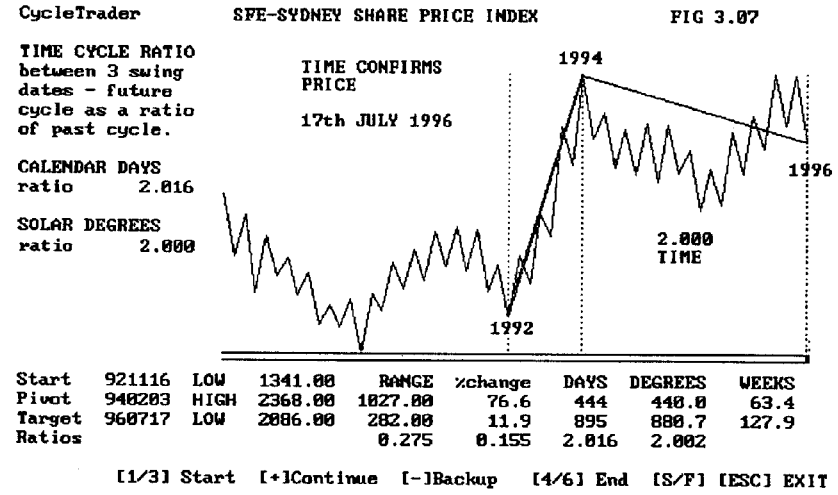


FIG. 3.05 ALTERNATE PRICE RELATIONSHIPS IN TRENDS OF SIMILAR DEGREE

Time Confirms Price Action

In Fig 3.05 a perfect price relationship was reached right on several important TIME cycle ratios. Figs 3.06 and 3.07 show the long term time present for the area of the 17th July 1996.





Percentage Change To Price

Percentage change to price between market tops and bottoms can often be a useful technical indication there is an order within the unfolding patterns.

GANN states in his teachings that price support and resistance occurs naturally at levels associated with the important ratios we are using for the dynamic time and price calculations.

For instance a 100% increase in value in a long-term trend would be a strong resistance level. Conversely a 50% decline of value would create a strong level for support. See W.D. Gann 10-9 where the ASX-All Ordinaries Index found support in 1987 after a decline in value of 50%.

Common expansions in value of 25%, 33.3%, 38.2%, 50%, 61.8% and 66.7% can be found in most markets. Currency markets tend to work to percentage gain or loss in major trends.

100% gain 1991 to 1994 - SPI
The gains made in the SFE-Sydney Share Price Index between the 1991 low of 1184 and the 1994 high 2368 was an exact increase in value of 100%.

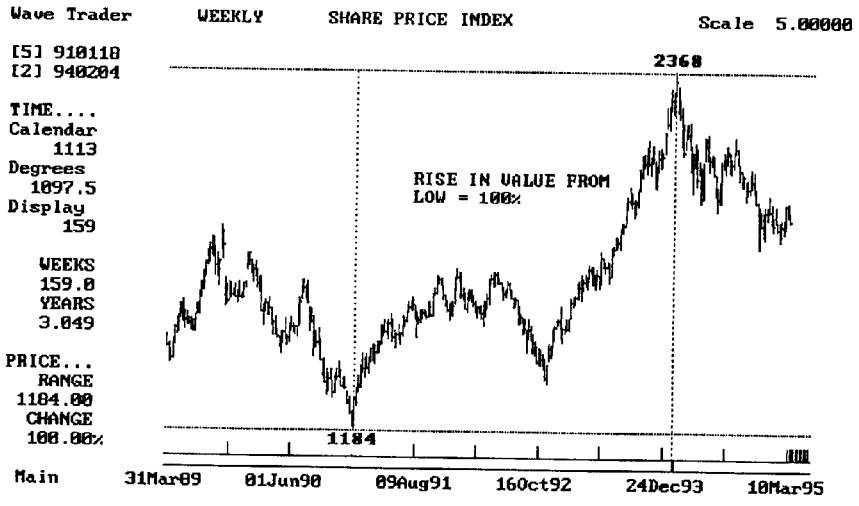


FIG. 3.08 PERCENTAGE CHANGE TO PRICE BETWEEN LOW AND HIGH

Dynamic Percentage Change Relationships

Percentage change can be used to examine dynamic price relationships in trends of similar degree, in the same manner as price units.

Often when a relationship in price units cannot be found, the answer lies within the percentage change relationships.

Percentage change is a third dimension factor of price.

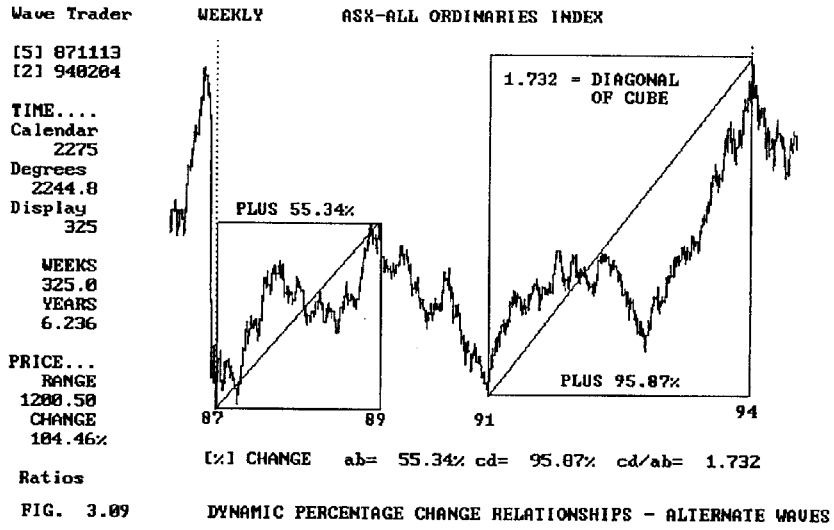


FIG. 3.09 DYNAMIC PERCENTAGE CHANGE RELATIONSHIPS - ALTERNATE WAVES

Whichever way the price of a commodity, stock, index or currency is quoted will often effect the way the geometry unfolds.

For instance, an old example from my second book Geometry of Markets II comes to mind when the IMM Deutsche Mark 1st Month Continuous contract made perfect geometric percentage gains and falls in three major degree waves. See Fig 3.10.

The low of 58.55 (920320) was also a 61.8% retracement of price in 38.2% of time. I remember it well because I predicted it well in advance, you can verify that one with Larry Pesavento.

Geometry of Price

Use all of the tools all of the time. CycleTrader makes the interrogation of price relationships swift and simple.

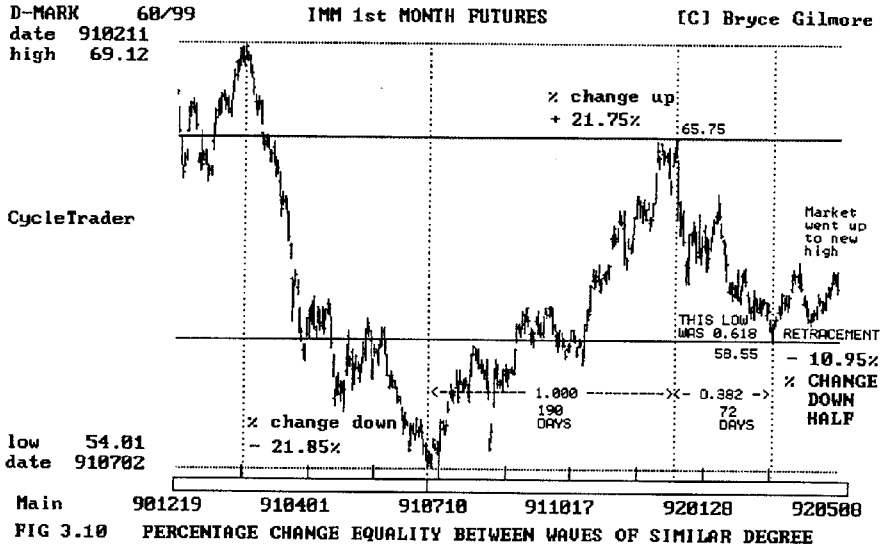


FIG 3.10 PERCENTAGE CHANGE EQUALITY BETWEEN WAVES OF SIMILAR DEGREE

Whichever way the price relationships unfold can be difficult to predict in advance - time cycles will be the deciding factor to confirm their validity.

4
Time Measuring Techniques

Measuring the proportional relationships between market trends (market highs to lows, and/or lows to highs, or lows to lows, or highs to highs) is no different to the approach I use for ratio analysis of price.

Time is a simpler calculation to monitor than price and is the more important tool.

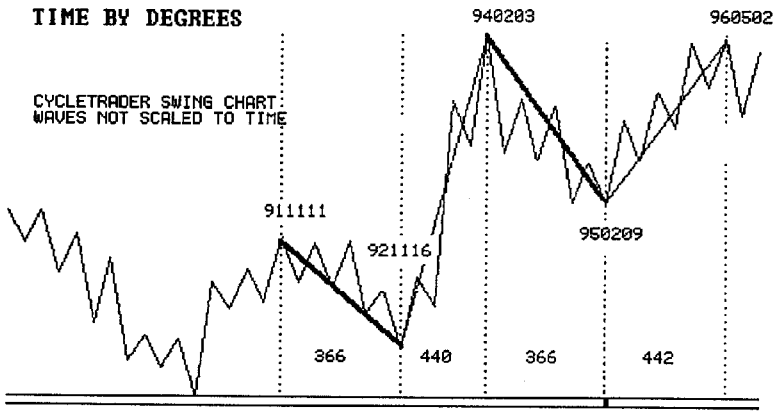
Relationships of TIME elapsed in trends will form in one of 3 ways:-

1. **Alternating cycles.**
2. **Direct cycles.**
3. **Internal cycles.**

If you make a study of any free trading market you will be able to identify time proportion between trends of similar degree. I am going to present some examples I have seen over the years to show you how simple they are to identify.

The exact date and price, at each important change in trend, are recorded in the swing file so every calculation relating to time is precise.

FIG 4.01 ALTERNATING TIME CYCLES



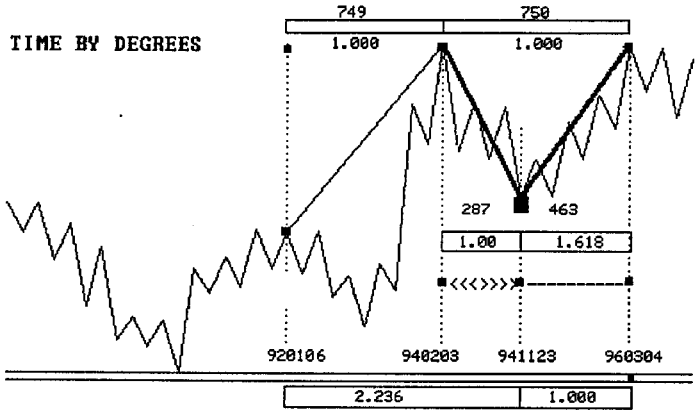
AUSTRALIAN ALL ORDINARIES INDEX - TIME CYCLES AT WORK

Direct Time Cycles

Time cycles can be measured in calendar days or solar degrees. I use both but prefer solar degrees because solar degrees reflect the natural cycles of the universe.

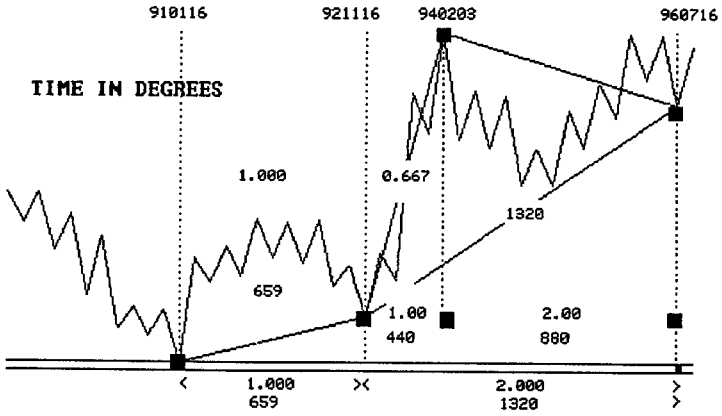
Solar degrees are the divisions of 360 degrees in the circle of 1 year. The elliptical path of the Earth revolving around the Sun causes the relationship between degrees and days to speed up and slow down.

FIG 4.02 DIRECT TIME CYCLES



AUSTRALIAN ALL ORDINARIES INDEX - TIME CYCLES AT WORK

FIG 4.03 DIRECT TIME CYCLES



AUSTRALIAN ALL ORDINARIES INDEX - TIME CYCLES AT WORK

Internal Time Cycles

The reason many analysts using standard time cycle techniques fail to recognise the simplicity of the geometry of time relationships between market highs and lows is because of a third dimension at work.

To simplify the explanation you have to imagine the market cycles are working along a geometric spiral or a harmonic square. If you study the Cannon of Proportion you will see how each sequence can relate to each other.

If the student takes direct, alternate and internal cycle relationships into account it is possible to predict the next critical point in time where the market trend will reverse trend.

On 3rd February 1994 the Australian Share market made a major change in trend. If you study the next three charts you will see the exactness of the time cycles squaring out.

Also see Fig 2.04, section 2-5, this top is displayed on a weekly bar chart.

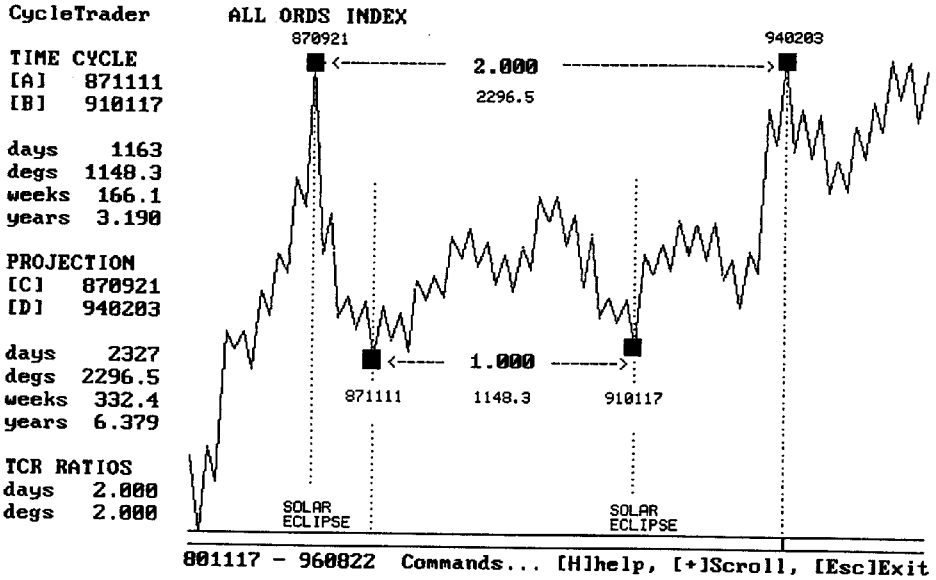


FIG 4.04 INTERNAL TIME CYCLES

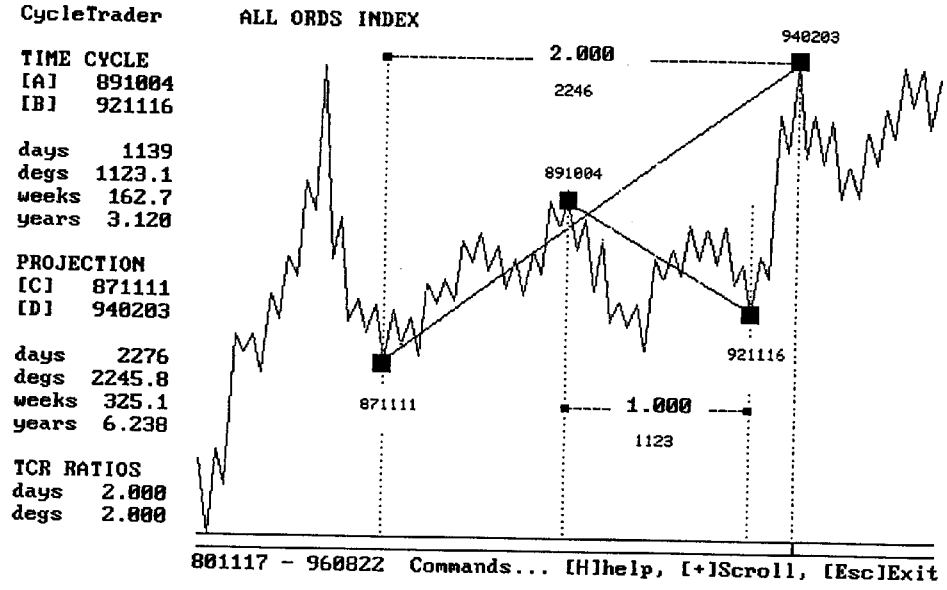


FIG 4.05 INTERNAL TIME CYCLES

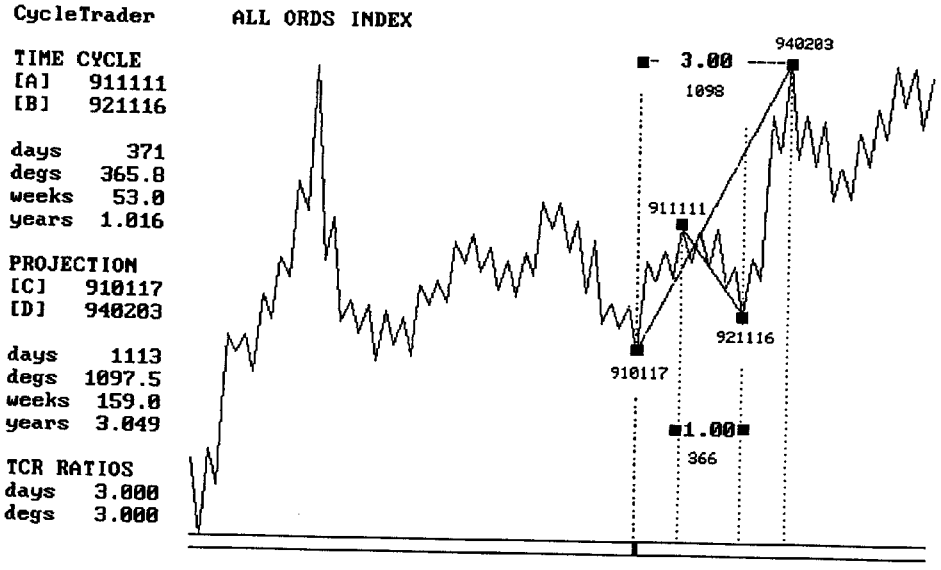


FIG 4.06 INTERNAL TIME CYCLES

Geometry of Time

I would like to point out something simple every analyst should know about identifying the strength of time cycle squarings; Future critical ratios should have some history of reliability based on past performance.

Every market should leave a footprint for us to work with.

If you look at the internal time cycle relationship (2.00) in Fig 4.04 culminating at the 1994 high, on its own this could have just been a random event. The fact that it wasn't is demonstrated by the ratio relationship with the prior major low, ie., the 1992 low. From the 1987 high to the 1992 low the time cycle relationship with the low/low cycle 1987-1991 was 1.618, see Fig 4.07. Prior to this relationship a couple of other important highs and lows were in geometric proportion.

When you discover a cycle at work you should always take note of the next critical ratio in our sequences of proportion, this will help you prepare possible future change in trend dates. As the dates approach the market will demonstrate by its own activity if the dates are important to us or not.

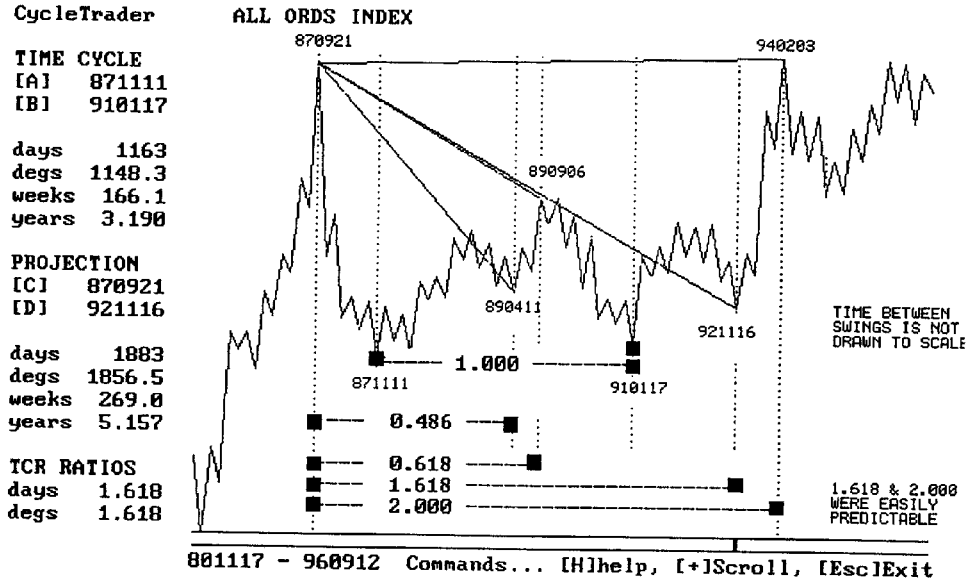


FIG 4.07 IDENTIFYING RATIO SEQUENCES FROM KNOWN CYCLES

For instance the next "RATIO" in this sequence would be 2.618 times the 1987-1991 time range forward from the 1987 high. The date was the 24th January, 1996. Only a minor degree low occurred on this date.

You could actually learn from this scenario of low to low projected forward from the 1987 high and project ratios of:-

1987 low - 1992 low	1806 degrees	forward from the 1987 high	
1.618	2922 degrees	2nd November 1995	Intermediate Low
2.000	3612 degrees	2nd October 1997	?

If you look at Fig 4.06 and project the next "square" of time, 4 times 366, from the 1991 low. The date is 9th February, 1995. The exact date where the market bottomed, see Fig 4.01.
This same "square", 6 times 366, from the 1991 low falls on the 19th February, 1997. This date coincides with 1 times the time from the 1991 low to the 1994 high projected forward.
The "square" of 2 times 366, from the 950209 low also falls into sync.

At this time the market has reversed trend exactly to the day of the 19th February, 1997 in an Intermediate degree.

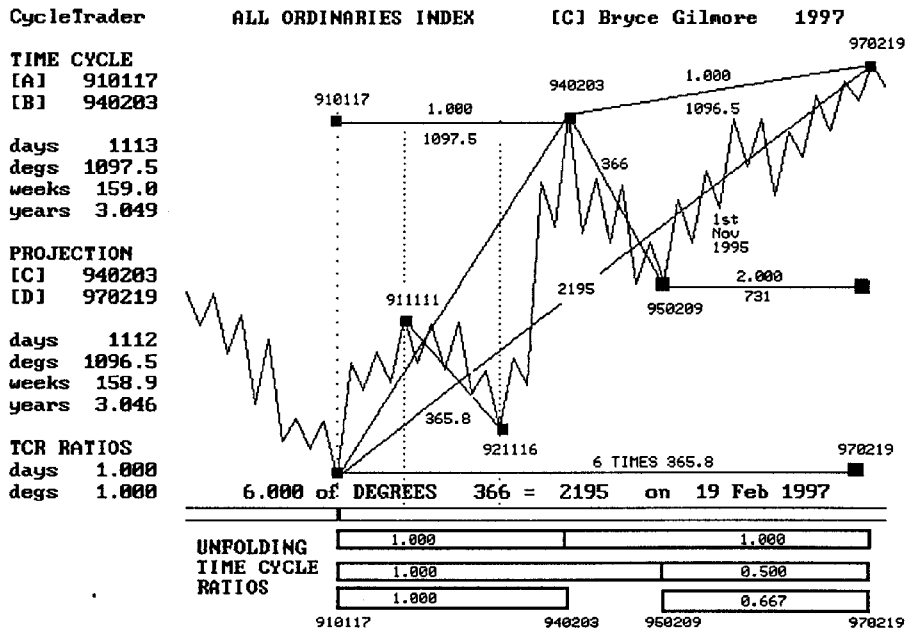


FIG 4.08 PROGRESSION OF TIME SQUARES FROM 1991-1994 SEQUENCE

The time measuring tools I have demonstrated in this chapter, are the most powerful tools I am aware of for detecting change in trend. There are other ancillary tools which I have mentioned in my previous two books.

I am going to digress for a moment as I need to impress on you the importance of the information I have just imparted.

I have spent 15 years and thousands of hours studying, programming and testing a wide variety of markets. I have satisfied myself these tools will work in any free trading market. Over the years I have publicly made many market calls either on the day or the day after an important market high or low. I have been right more times than wrong. My belief system in this methodology is tuned in because I've done the hard work. Yours can be the same if you also do the work.

One of the most outrageous market calls I made in public, was at a meeting of technical analysts on the night of the 1987 low in the Australian Share Market, it was Wednesday the 11th November 1987 and the market had closed on its low for the day. That day the market index had reached a level just over 50% (50.3) off its (then) all time high on the 21st September 1987 and completed a 61.8% (62.2) retracement of all the gains from 1982, a decline of 1163 points in 51 days, from a high of 2312. The fall from grace in this market was swift and devastating and caught 90% of the traders I knew at the time. I had bought some blue chip stock that day and my broker Alan Balding from Prudential Bache was present at the meeting to confirm it. Everyone in the room, about 30 people, were in a state of shock when I said, "The market has bottomed today, if it hasn't you can come around to my place next week and you will find my papers, computers and everything I have worked on in the last 5 years in the street, because I will be changing my occupation!"
I must admit I was totally serious at the time, lucky for me I was right because I have really enjoyed teaching people about these methodologies since.

More recently, in front of 45 ATAA members, on the 18th April 1995 I predicted the top of the Japanese Yen / US$ for the next day. The top was made on the 19th as forecast. Then in Malaysia I was a speaker at the 1st WORLD TECHNICAL ANALYSIS CONFERENCE over the weekend of July 1-2, 1995. At the lunch time panel, in front of 250 people, I warned everyone not to buy the Yen for it was in a major bear market. It never traded higher than the Friday's price and since then has declined over 25% in value.

A month or so prior to the share market crash in 1987 one of the major brokers, McCaughan Dyson in Melbourne, had been negotiating with me to come and work with them as part of a strategic investment research group. I declined to go

after several weeks of negotiating and board room lunches. The problem for me was, I kept telling them we were very close to a severe market downturn.

I recommended they should warn their clients to start hedging, I even put it in writing. When I realized they didn't want to know, I decided I couldn't work with anyone who didn't respect my work, they only wanted me as a figure head.
I got a lot of satisfaction out of telling them "I told you so" when the market took the huge dive.

Another thing of interest I must mention relates to the time leading up to the share market crash in October 1987. A prominent futures broker in Melbourne ran a futures trading contest which began in early September 1987.
The contest was for real time trading on your own account and obviously designed to increase their brokerage commission and client base. It cost $1000 to enter and all entry fees were to be distributed as prizes.

Everyone with a local reputation in the industry was solicited to enter. In fact they even did a special deal with me so I would play the game. They agreed to, and did, refund to me a percentage of my brokerage fees after the event, because I wouldn't pay the competition rate, except for the purposes of the competition.

To my best estimate there were about 55 private and corporate entries.
The results were based on percentage gains to the starting value of your account equity. Leaders results were published each Friday in the Financial Review, our daily financial newspaper.

At no time were there anymore than 5 traders names with positive % gains on the list published each Friday.
I asked the broker why they were only publishing positive results, and he said, "We don't want to embarrass anyone".
You can imagine why, it would have been bad for business!

After the share market crash the competition was cut short, the end result was 4 or 5 people in profit. I was number 4 or 5 with a 50% gain in equity on my account over 8-9 weeks trading. It computed to an annualized return in excess of 400%.

I used time and price analysis to select all my trades throughout the competition, my tools stood the test and didn't let me down.

The reason I mention these things is because it reminds me to stay doing what I know is right. I know I can rely on my tools to forecast or trade without hope or fear, everything I do is based on probability and knowledge.

More recently I have refined my tools to only the ones I am showing you in this manual. If all you do in the future is follow the market and keep a track of the unfolding patterns and cycles you will always be prepared for possible change in trend.

The technical analysis world has attracted a lot of charlatans to its ranks. Many claim to have the "Holy Grail" to sell you. I can tell you from experience, there is no "Holy Grail" but if there was, the techniques I am teaching you would be the closest you could get to it.

TIME CYCLES form in every market, the cycles are peculiar to that market or market complex, they are not some standard time value such as 13 weeks, 26 weeks, 38 weeks or 52 weeks. They are dynamic and will continue to repeat themselves time and time again.

Carefully study each market complex you are going to trade and see if you can uncover the predominate cycles of time that are carefully camouflaged within.

Once you find the key the future will seem so easy you won't believe it.

5

Dynamic Vibration Analysis

[C] 1986 Bryce Gilmore

Dynamic Vibration or Space Analysis if you prefer is a derivative of both TIME & PRICE.

The dynamic vibration of a range is calculated thus:

Number of price units from low - high / by number of days or degrees

For instance if a trend began at a level of 2086 and terminated at a level of 2520 it would have advanced 434 units of price.
If the time from the low to the high took 217 days then we could calculate the Vibration as:

Price = 434 **Time = 217**

Dynamic Vibration = 434 divided by 217 = 2 units per day

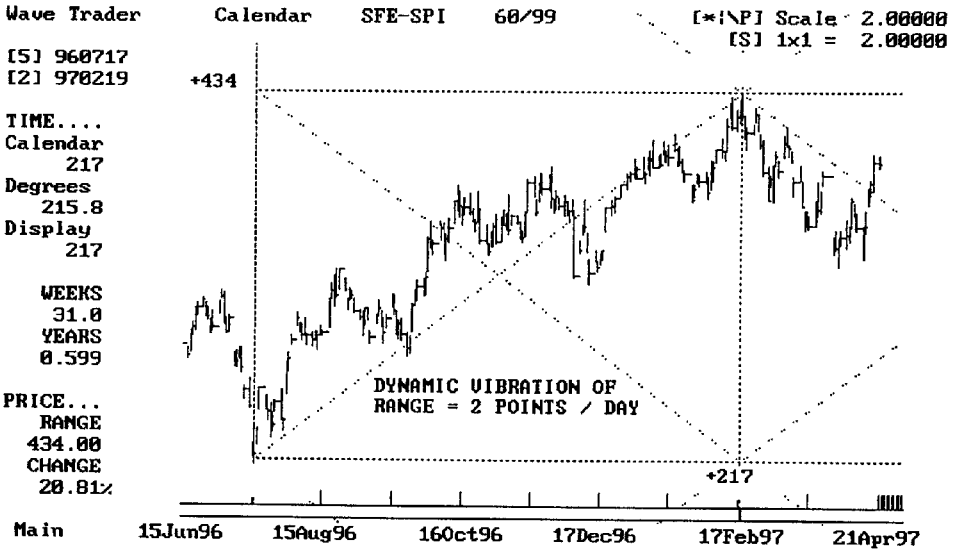


FIG 5.01 CALCULATING THE DYNAMIC VIBRATION OF A RANGE, UNITS / TIME

Dynamic Vibration Analysis

INVOLVES COMPARING INDIVIDUAL MARKET CHANGE IN TREND LEVELS FOR GEOMETRIC RELATIONSHIPS IN SPACE.

IF ONE CANNOT IDENTIFY A GEOMETRIC RELATIONSHIP DIRECTLY BETWEEN PRICE UNITS OR TIME UNITS THEN A COMBINATION OF BOTH SHOULD BE EVIDENT.

Relationships can form in similar ways to the way we would compare Price or Time relationships.

Market corrections

Sometimes in a market correction the price level where a reversal and resumption to the prior trend begins does not fall on a retracement ratio of the sacred canon.

This example will explain the concept of Dynamic Vibration in a market correction.

The ASX All Ordinaries low of April 3, 1997 broke just below the 0.382 price retracement level of the prior bull market of similar degree. Yet, price support fell exactly on the 0.500 dynamic vibration angle of the previous range vibration, indicating a geometric relationship between time and price.

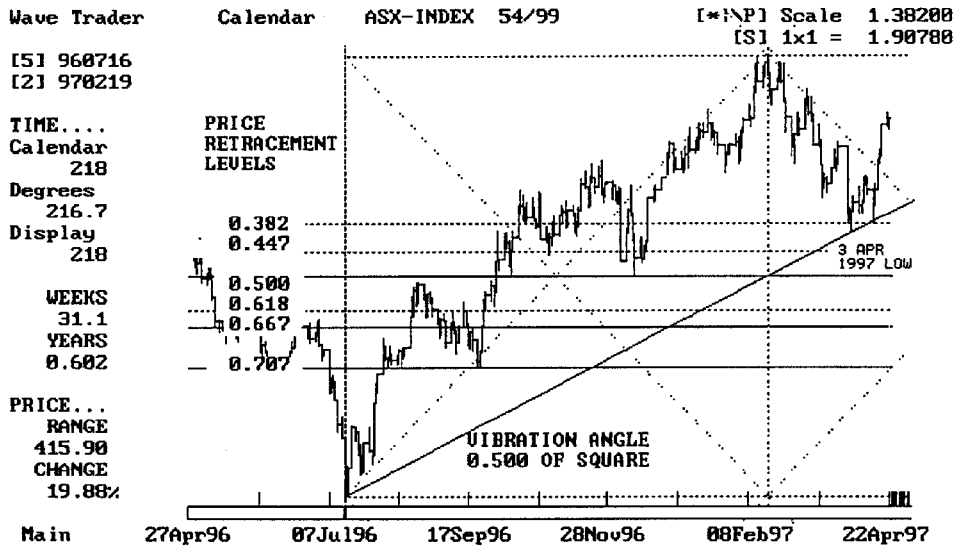


FIG 5.02 DYNAMIC VIBRATION ANALYSIS RELATING LOW-HIGH-LOW GEOMETRY

Dynamic Vibration Ratios between Alternate Trends of Similar Degree

This methodology is similar in technique to comparing either Time or Price.

A geometry of Time and Price between waves of similar degree can often be confirmed in this way. This technique is extremely useful when you have some doubt as to the level of degree of trend change to expect.

Once again I will remind you, "The Elliott Wave Theory states, 'All waves of similar degree will relate in both time and price amplitude.' R.N. Elliott."

In this example of the July 3, 1997 high in the Sydney Share Price Index, the expansion rate of the 1994-1996 range is multiplied by 1.618. The 1.618 vibration angle intersects the July 3 high when drawn off the July 17, 1996 low. Also the 0.707 vibration angle intersects the April 3, 1997 correction low.

It is because of this knowledge I named my previous two books GEOMETRY OF MARKETS.

When it comes to identifying market tops and bottoms VIBRATION clears up the picture if the Time and Price signals seem a little vague.

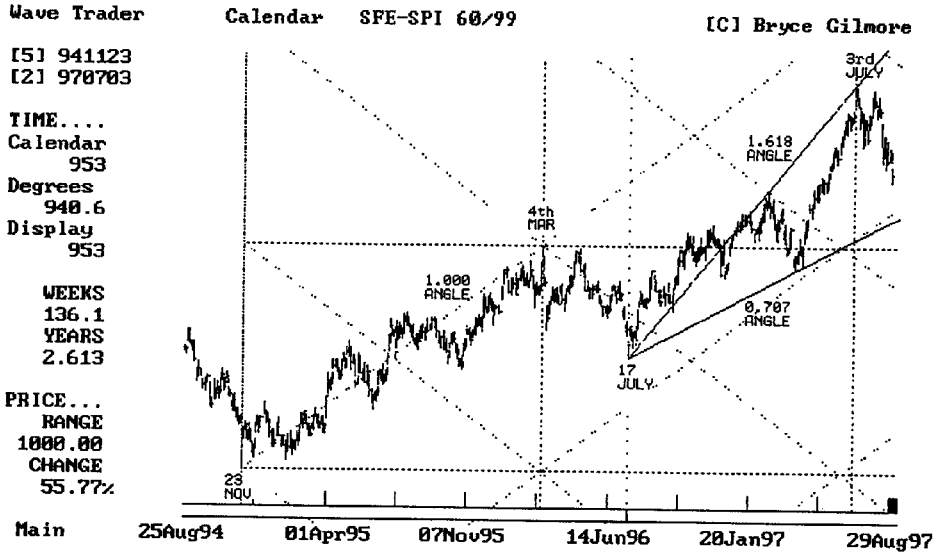


FIG 5.03 DYNAMIC VIBRATION GEOMETRY BETWEEN WAVES OF SIMILAR DEGREE

Dynamic Vibration Projection Patterns

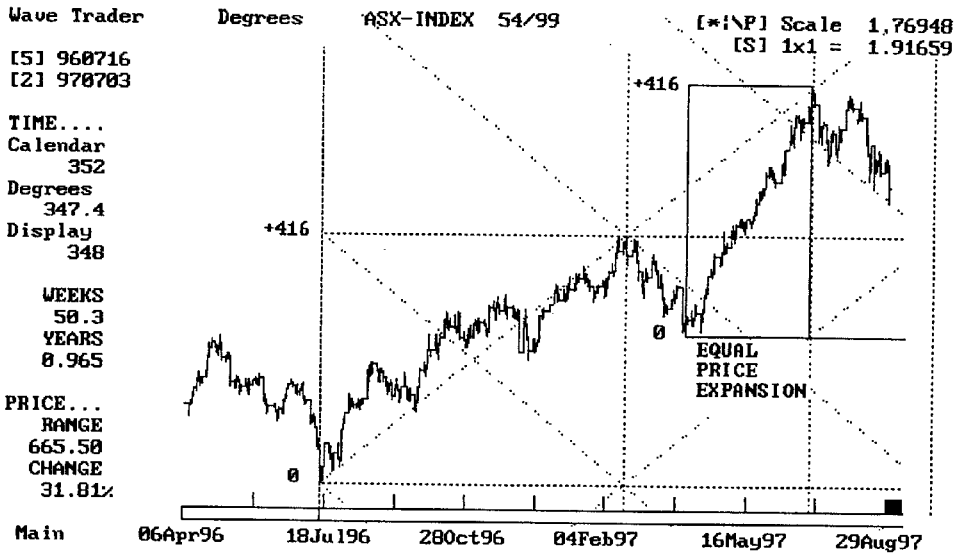


FIG 5.04 DYNAMIC VIBRATION PROJECTION OF A PRIOR RANGE GEOMETRY

Notice how the 1x1 range angle intersects the July 3, high at the equal range level projected from the April 3, low. This is geometric time and price squaring.

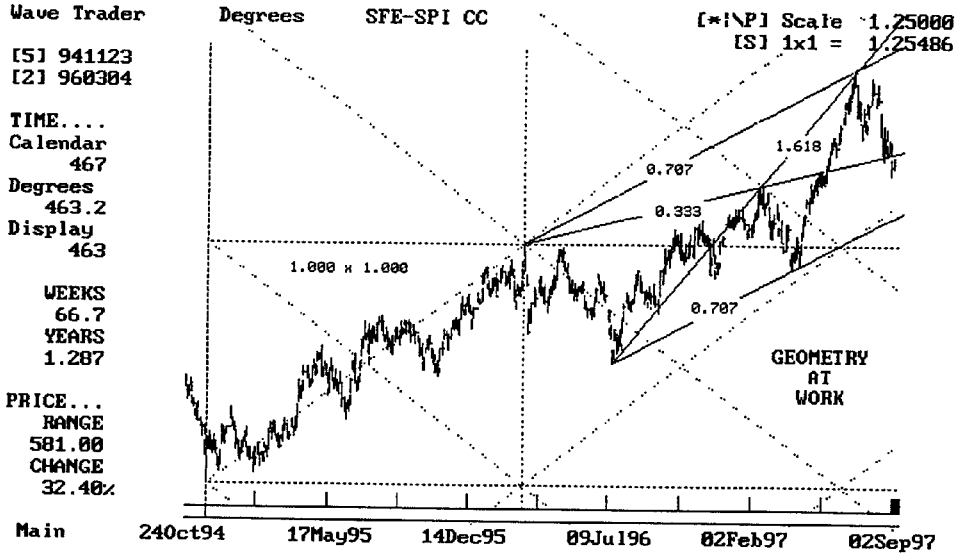


FIG 5.05 DYNAMIC VIBRATION ANGLES TAKE ON A COMPLETELY NEW MEANING

Dynamic Vibration Sequences In Corrections

During the unfolding bull market from 1994 to 1996 I observed the following ratio sequence between the advances and the corrections. The 1st correction terminated on the 0.382 angle of the advance, the 2nd on the 0.486 angle of the advance and the 3rd on the 0.618 angle of the advance.

Corrections will often terminate on angles drawn at strict geometric ratios of the prior advance. When time is up (on a pressure zone) always review the dynamic vibration relationships for a confirmation of time and price squaring.

Corrections will often terminate on price retracement levels as well as direct vibration angles 50% of the time. Other times they will oscillate between price and vibration.

Use all your tools all of the time and you will be rewarded. When in doubt follow the trend!

Always remember, the truth is in the experience! The geometric relationships of time and price between unfolding waves in any market have stood the test of time, and will continue to do so in the future. Be a believer and profit from this knowledge.

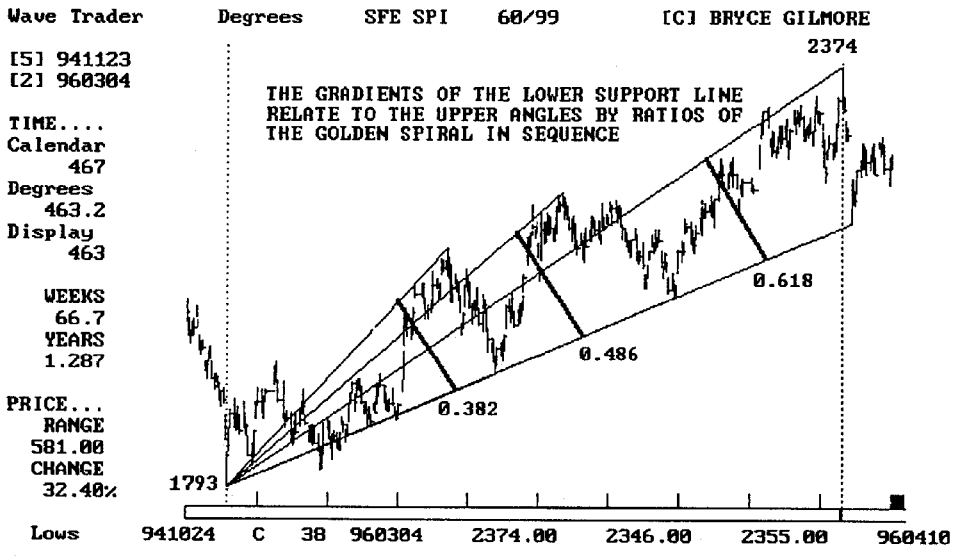


FIG 5.07 DYNAMIC VIBRATION SEQUENCES IN CORRECTIONS 0.382, 0.486 & 0.618

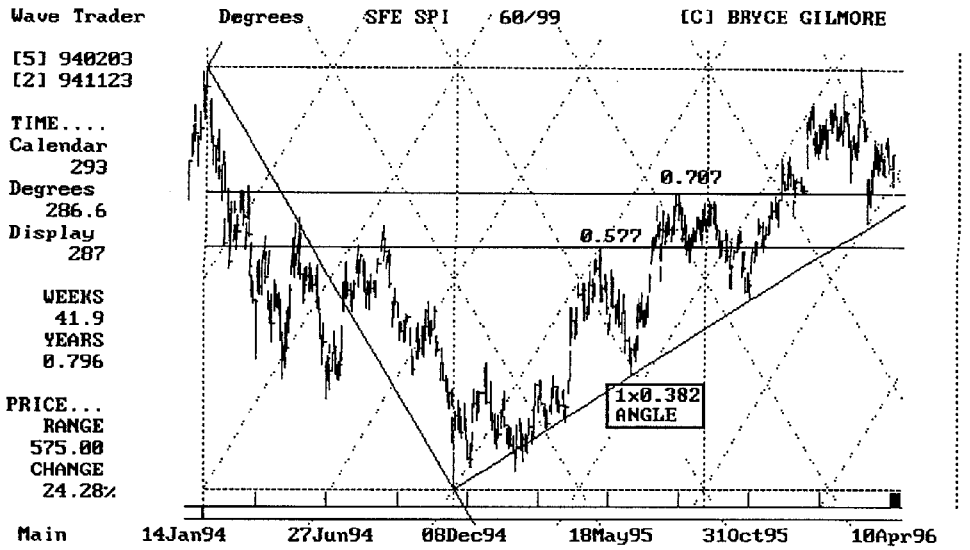


FIG 5.08 DYNAMIC VIBRATION OF A PRIOR RANGE - 0.382 ANGLE ACTING AS SUPPORT

If you review Fig 5.07 the 3 correction lows were also related dynamically to the prior major range (1994 bear market) vibration angle of 1x 0.382.

In Gann terms the bear market from 940203 high 2368 to the 941123 low 1793 squared price in time, 575 points in 287 degrees, 2 points per degree. Vibration rates as accurate as this occur from time to time, ie., 1 to 1, 2 to 1, 3 to 1, et cetera, but I wouldn't count on it happening to often, I only accept it when everything else lines up.

Chart Scaling is important for a visual perspective

To measure and calculate **DYNAMIC VIBRATION requires** the component of **TIME** to be scaled in either **CALENDAR DAYS or SOLAR DEGREES.**

Trading day calculations have no validity in time calculations as a chart of trading days alone is corrupted due to weekends and holidays.

When it comes to time - time is time - time does not have any gaps - time is important whether the market is open or not. Price will adjust for time when the market is open.

6
Chart Patterns I Monitor

My first serious introduction to charts was through my broker back in early 1981. I began by subscribing to a weekly chart service. In the beginning my technical expertise was limited to drawing trend lines on my charts to locate support and resistance levels. As time went by I was introduced to the idea of regular chart patterns forming in the many markets I was trading. It didn't take me long to realise the predictive value of PATTERNS formed on my charts.

Understanding the implications of chart patterns will always reward the technical trader. It gives you an edge when you need to make a decision based on time and price analysis.

PATTERN ANALYSIS is so important for determining the strength of any market trend.

I monitor CASH MARKET prices against the FUTURES CONTRACT.

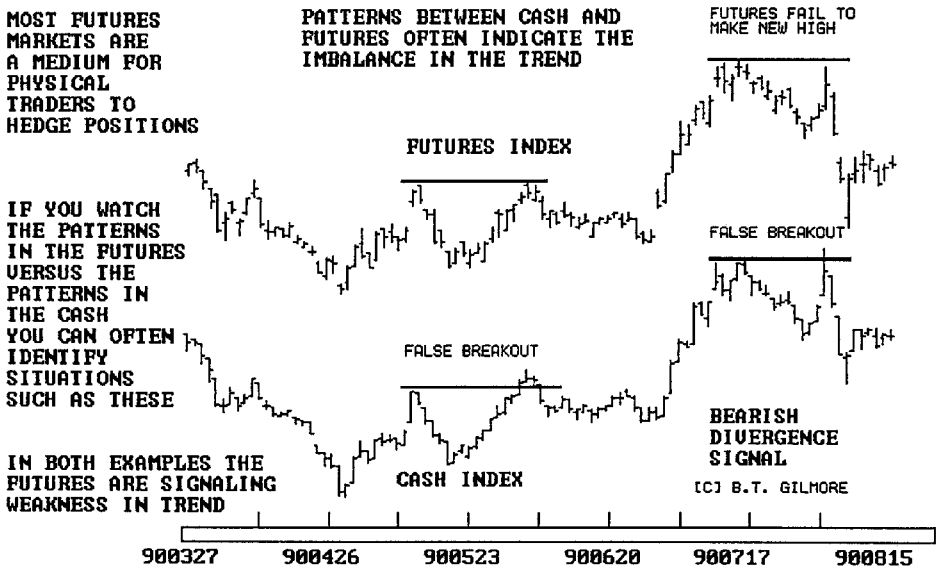


FIG 6.01 MONITOR CASH & FUTURES FOR BULLISH OR BEARISH DIVERGENCE

One of the best confirmations of strength of trend, at a top or bottom in the market, is to compare the CASH market price action against the FUTURES for DIVERGENCE in price.

I am often surprised when I meet seasoned analysts and they are not doing this. Fig 6.01 is a comparison between the ASX - All Ordinaries and the Sydney Share Price Index during a major correction in 1990 within a continuing bear campaign. The reverse situation is more likely in a bull campaign, ie., in a bull campaign the Futures would make a new high and the Cash would fail to confirm. You will have noticed throughout the prior sections I have many double tops and bottoms on my swing charts. All of these evidenced a divergence between the Futures and the Cash markets.

Market Strength

Another practice one can use to monitor the underlying strength of a market, is to compare the top stocks against the broad market.
For instance the Dow Jones Industrials Index and the Dow Jones Transport Index were used by Charles H. Dow to formulate his Dow Theory.
If both were making new highs the overall market was bullish, if one was failing to make new highs when the other was he considered it a non-confirmation of trend.
Recently the DJIA and the S&P500 signalled a bearish divergence prior to the mini melt down in October 1997 as Fig 6.02 shows.

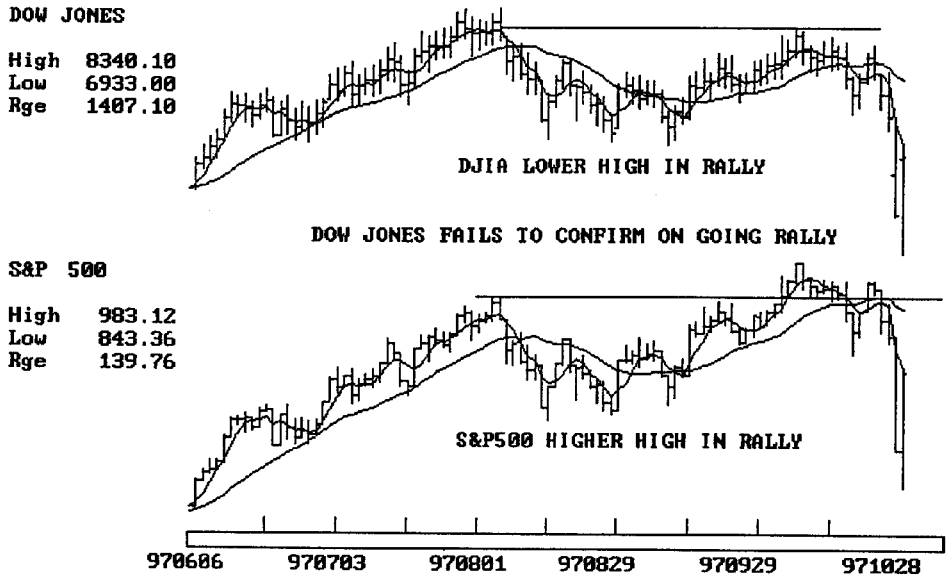


FIG 6.02 DIVERGENCE BETWEEN TOP 30 STOCKS AND THE BROAD MARKET

The first sign of trouble was when the moving averages and the Directional Movement Index signalled a SELL 7 days prior to the melt down. The pattern was an added extra for the astute analyst, including me.

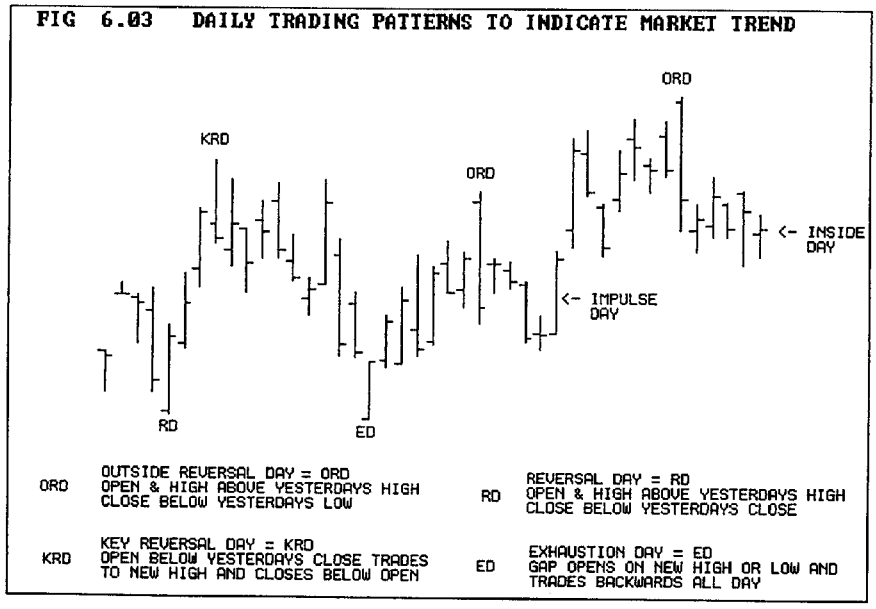
Daily Price Activity (Range)

Daily trading activity, ie., how the actual current trading day related to the prior day or several days is a very important indicator of the market strength.

The **OPENING PRICE** is very important in relationship to the **CLOSING PRICE** each day, especially when the market trades in a wide range.

Technical analysts have special names for **daily range patterns**, the primary ones are:-

Reversal day
Key reversal day
Outside reversal day
Island reversal days
Inside day
Exhaustion day
Impulse day



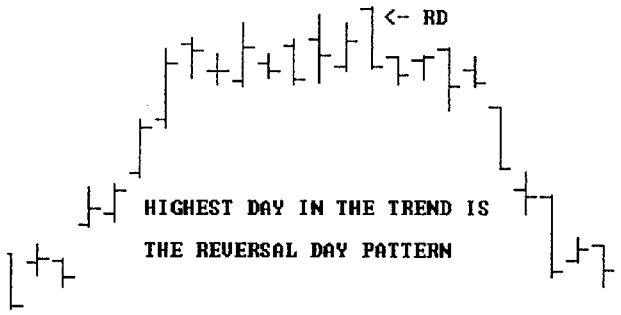
The relationship of todays closing price to yesterdays closing price, today's opening, high and low price can often alert traders to a shift in demand by buyers and sellers.

REVERSAL DAY PATTERNS are an important indicator when they occur on a price and time zone at extremes of a medium term trend. They are also important for the identification of the expiration of a corrective move.

The identification of a REVERSAL DAY can alert you early when there is a change in the MINOR trend.

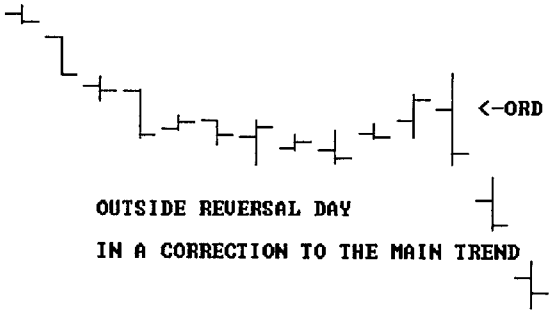
Reversal Days

Reversal days are any day where the market makes a new high or low in the primary trend and then closes with a negative advance to the prior days close. The larger the daily trading range the more important.



Outside Reversal Days

Of all reversal day patterns the outside reversal day is the most important in a corrective move. The wider the range on the day the more important the signal. If the high or low of the day coincides with an exact price retracement level then the reversal of trend should continue.

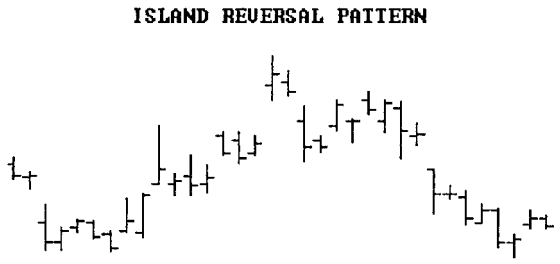


Key Reversal Day

A key reversal day indicates a change of trend if a price target is achieved at the high or low for the day.

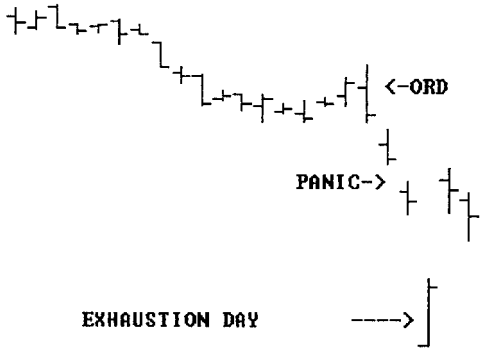
Island Reversal

Not seen very often but can occur in a blow off stage of a bull or bear market. The "island" is a price range of 1 to 3 days which gaps above or below the prior days range then gaps back into that range reversing the trend.



Exhaustion Days

The exhaustion day pattern is more often than not seen in a market shake out. Prices generally decline beyond a fair value because of panic. The opening price will gap down severely from the prior days close, it will be the low for the day and the market will rally strongly.



If you understand the components which make up **DAILY PRICE PATTERNS** you can look at a chart and read between the lines, especially when a strong time and price intersection falls on the high or low for the day.

Japanese Candlesticks

Japanese candlestick charts can be helpful when looking at patterns. The **DOJI** means "A sudden danger". A doji is formed when the opening and closing price are the same. According to Steve Nison the doji are valued for their ability to call market tops.
The reason for the negative implications is because the doji represents indecision among the buyers. It takes the conviction of buyers to sustain a rally. A doji after a sustained uptrend represents a vacillation by buyers.

The **gravestone doji** is a particularly important daily pattern for a reversal in an uptrend.

The **three black crows** is a good confirmation that the bears are taking control over the buyers. A black crow is formed when the market closes lower than the opening price. Three consecutive down days with closes lower than the opening price indicate a break down in trend.

I like the way Japanese candlesticks make the pattern more visible. **BLACK** days are **DOWN** days, **WHITE** days are **UP** days.

There are more than 50 Japanese candlestick patterns explained in Steve Nison's book Japanese Candlestick Charting Techniques, the explanations are clear and concise, I recommend it.

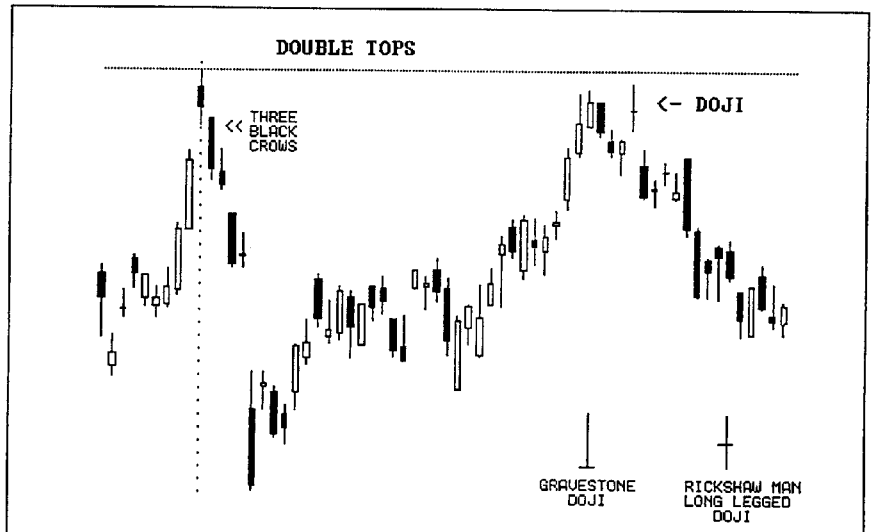


FIG 6.04 DOJI - A sudden danger - CLOSES ON OPENING PRICE