

years, etc., will reflect all cyclic harmonics for that stock. This square can be halved and quartered by the use of diagonals to bisect the 50 time unit master square down to the smallest tradable unit that is practicable. These diagonals, that subdivide this square, give rise to trendlines that are the critical timing lines for that particular stock or commodity. These trendlines can be subsequently continued into the future for any length of time, so you will know all possible support and resistance levels for any foreseeable time period. Because this principle is the basis of all charting, we can use a facet of it to quickly determine where highs and lows will come out in the future or meet massive resistance and support. This application comes from the observation that, in constructing a square out of building blocks (more commonly known as a cube), the smallest divisible unit of that cube is each side, or the square root (actually it is the cube root, but we are only looking at the two dimensional side, since that is all we chart on paper). There is no other fundamental unit that will construct the square. On a more minute level, the reciprocal of the square root represents a single building block, but, for our purposes, the main side of the square is the foundation. It stands to reason that this square root being one of the fundamental building blocks of the cycle will appear as a unit or an expansion factor in all subsequent manifestations of that cycle. For instance, if our stock tops at \$100 and we know the square root is 10, we can surmise that minimum fluctuations will approach \$10. Larger movements will be additive sums like \$10, \$20, \$30, etc.

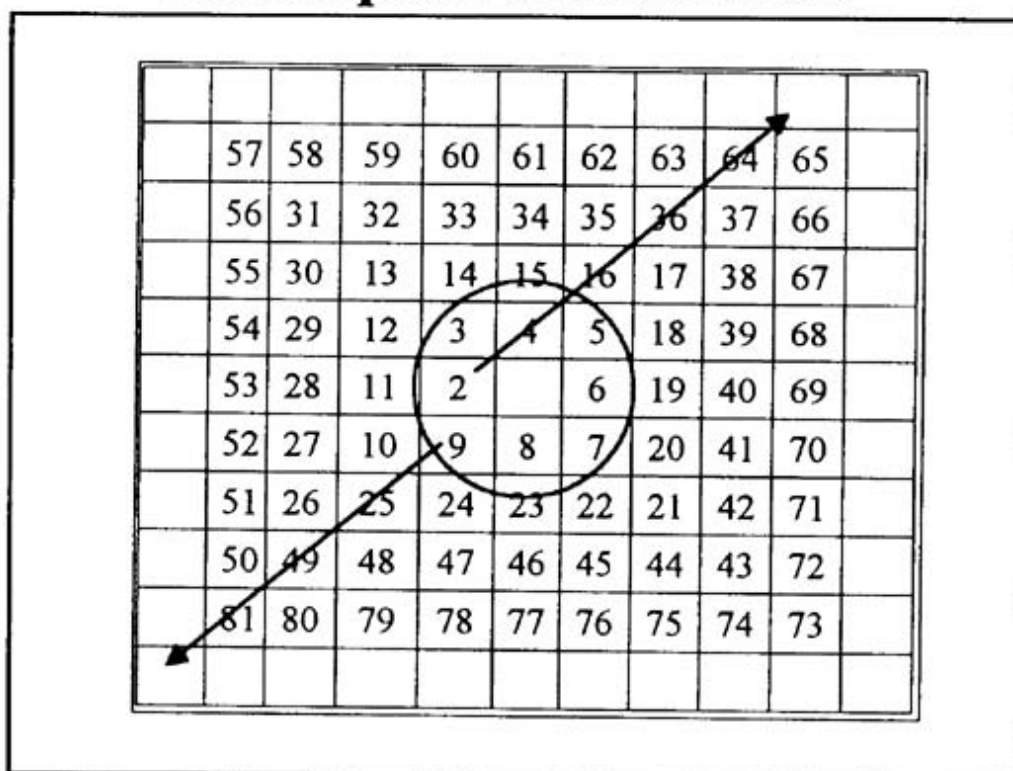
This type of simple increment is easily utilized. On a more advanced level, we look at expansion sequences by starting with the root and incrementing it, then squaring the incremented sum. We could take 10 and add 1 to get eleven, then square 11 to get our target of 121 as being the first massive resistance number after 100. For most traders, however, 21 units from 100 to 121 is too large a trading unit, so we would want to increment the root 10 by fractions such as .25, or 10.25 squared is 105.06. Then $10 + .50$ squared is 110.25. Many of you will immediately jump to the enlightened conclusion of using Fibonacci increments like .618, 1.382, 1.618, etc., and that would be a step in the right direction.

In regard to the market averages, almost all the past highs and lows in history are related to one another by a square root sequence. For years, it was an addition of 5 to the root, but lately it has advanced to double digit increment levels. The real key, of course, remains to match both the increment support and resistance levels to a commensurate time cycle, so that both time and price come together at the end of the cycle. Only then will you see the final high or low.

W.D. Gann formalized this process in a chart he called the Square of Nine chart, since it had at its core the first nine numbers. These numbers were arranged in a circle and a large cross. North, south, east and west were drawn through the number spirals. The numbers incremented until they made a full circle, then jumped to another rung to make the next larger circle. I am sure most traders have seen this wheel or even use it daily. A whole book could be written about its origin, but, for our purposes, you should know that it is a simple square root calculator and to go completely around one full circle from any starting point and back, you simply take the square root of the starting number, add 2 and square. If you want to go 90 degrees from any origin, take the root,

add .50 and square. To go exactly opposite the origin number, add 1 to the square root and square. Each of the 90 degree rotations provide resistance to both price and time, so here too you would like to have multiple correspondences for accurate results. The beauty of the drawn circle arrangement is that all numbers line up in the four cardinal points on a straight line, and one merely draws a circle around the past high and low numbers to see if they fall in a line or obvious sequence. Once this sequence is determined, you have the eternal key to that stock or commodity.

Gann Square Of Nine Chart



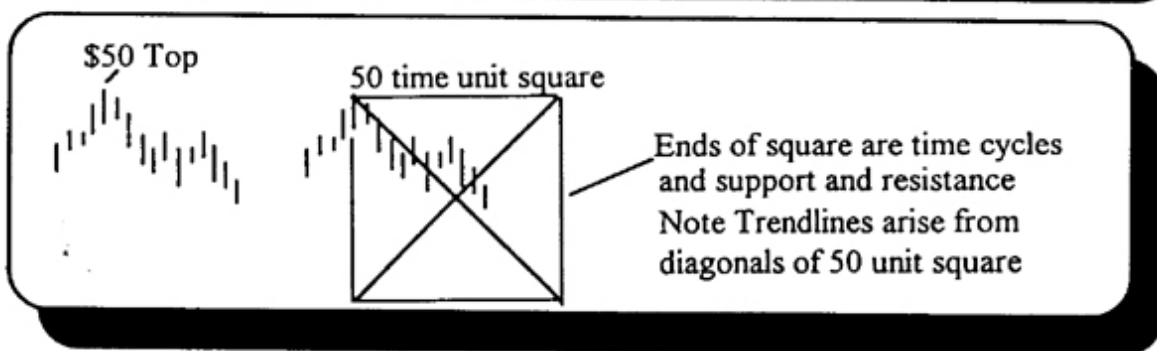
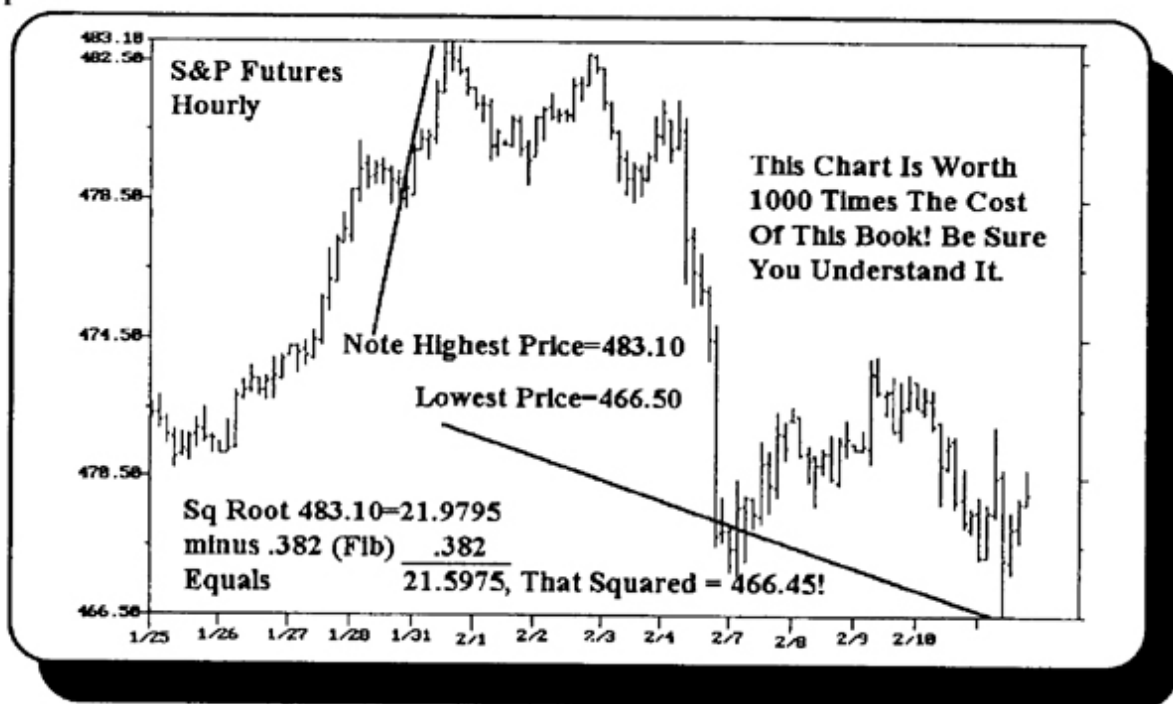
The above Gann chart starts in the center (blank) and proceeds outward by the numbers. Especially note that the first circle of numbers stops at 9 and then starts a new circle with 10 to 25. Each circle ends at the square of odd numbers, as shown in the line drawn down from 9 through 25, 49, 81, etc. The opposite part of the chart shows the even squares of 2, 4, 16, 36, 64, etc. Note that if you take a number such as 46, calculate the square root, and add 2, you will get 77, the next number down on the chart. If you add 1 to the square root, you get 61, which is directly above 46 on the upper half of the chart.

If you can imagine the orbits of an electron and the fact that the electrons when stimulated can “jump” to higher or lower states, then you will have a better appreciation for what happens to stocks when they enter one of these new circles. Also, note the natural phenomena that higher

priced stocks move quickly and further between corrections than lower priced ones. On the chart, these are the numbers in each "rung" of the circles which have more numbers as you go to higher cycles. Finally, note the chart is not complete but can be continued to infinity, and you should make your own up to 4000 or so, if you trade the Dow Jones Averages. In theory, this is a generalized chart based on the natural numbers. In the case of specific stocks, you might want to start your chart with the multi-year extreme high or low price in the center and cycle up or down from that price to get very specific price pattern identities.

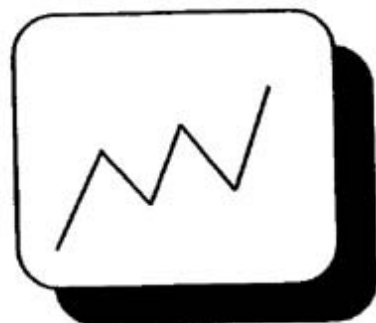
Day traders will note the simple but extremely powerful technique of incrementing the roots of the S&P Futures or the OEX. An S&P number, such as 465 whose root is 21.5638, can be incremented or decremented by sixteenths to get the following sequence: 465, 467.70, 470.40, or 473.12 for the upside targets, and the decrement would be: 465, 462.31, 459.62, and 456.95 for three sixteenths. Number sequences other than sixteenths could be used if you find them more appropriate. The root increments of .25 represent a 45 degree rotation around the Gann Square Of Nine Chart.

Again, I wish to stress that the information in the above few paragraphs is quite valuable, and you should make sure you thoroughly understand the concept before going on. The following are examples:



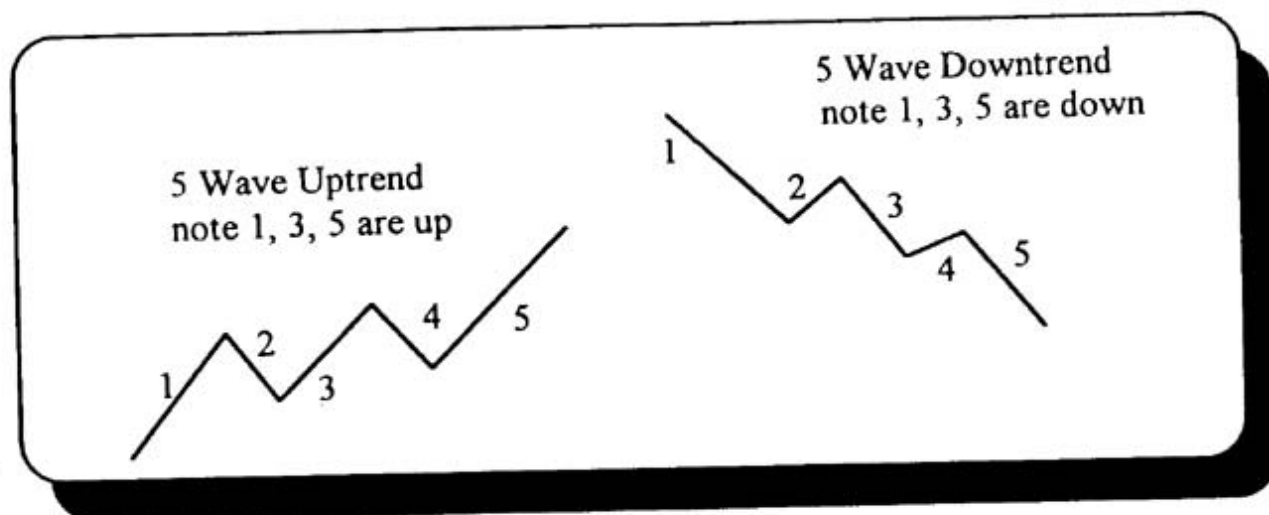
My *Geometry* book goes into great length constructing Gann Squares, and you should study that work if you want to grasp the reality behind the idea. For our purposes here, however, know that on your charts you want to keep track of time cycle counts from important highs and lows, and the easiest way is to construct a "square" around the price level equal to that price level in either a time period of hours, days, weeks, or months, related to price units. As each square of the fundamental time unit ends, a major cyclic turn will manifest in the stock or commodity. Sometimes the simple geometric square or circle figure will point to the price target, but one of the real secret keys to forecasting is to use the Gann Master Time and Price Calculators. Few people understand these, so be careful if you spend a lot of money acquiring them. In principle, they work off the Square of Nine or the "Octagon Chart". As previously explained, this is a root calculator, but *more important* than the price levels shown on this chart (which is all 99% of the traders bother with) is the fact that these numbers represent *harmonic time periods* from past highs and lows. The procedure is to find where you currently are in **terms of time**, by noting the numbers in the wheel and converting them to days, weeks, or months, from a past major high or low. Once you know where you currently are located on the chart in terms of an angle radiating out from the center, you can then move along that angle *back to the previous cycle* in the immediate rung prior to where you now are. You then go back to a chart on that prior calculated date and find out if it was a high or low. Your current forecast on the present calculated number rung will likewise be the same -- that is a **high if the prior one was high or a low if the prior one was low**. It is important to note that, going back to the prior theoretical date on the wheel, you may find, on your actual historical chart, no high or low on that date. This is what confuses most people who use this method. What you do is look forward or backwards from that *theoretical* date by usually 3 to 8 trading days to find the *actual* high or low, and then you forecast that the current cycle will come out plus or minus that same amount of time this year as it did in the prior cycle. If it was 4 days early last time, it will be 4 days early this time. Importantly, it will usually be the same character -- a high or low. Once again, I will not show an example in this book because it is too important. If you desire knowledge, you must do the work. I will just point.

Waves



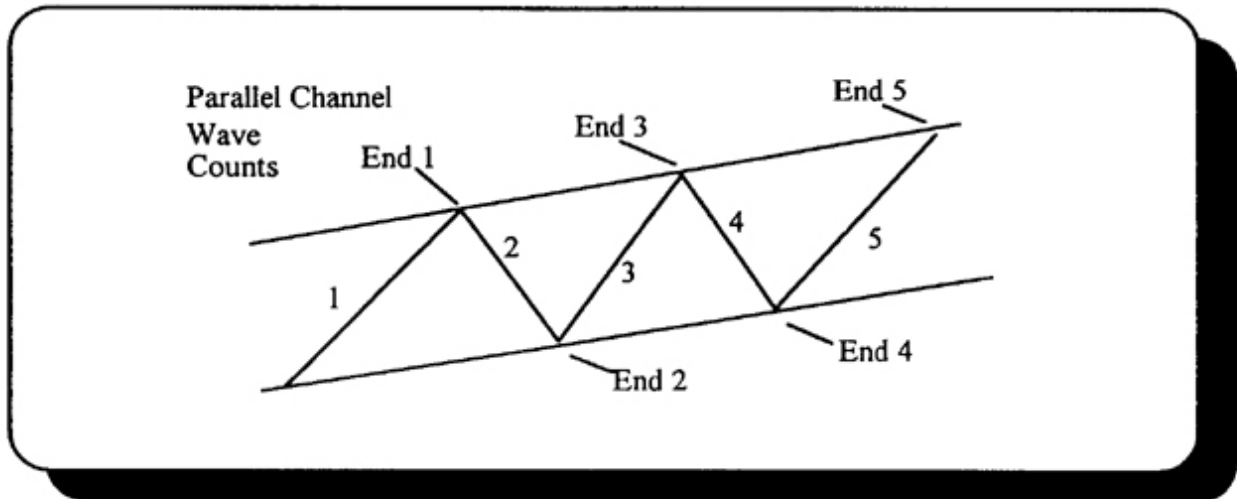
Waves are really just recurring patterns that have a specific shape and can be used for predictive purposes. Although there are an infinite number and type of waves, the most common have traditionally been classified as **five** wave movements for a *primary trend* and **three** wave movements for the *counter trend*. A five wave pattern realistically has but three upward movements separated by two downward thrusts for five in total, but three going up and two going down. At the end of all five, the big counter trend movement takes place in three waves or two down separated with one up. This is for a primary up trend. A primary downtrend would have five waves down and, at the end of that, three counter waves up. Basically, the most important point is that when you see five waves clearly know a big change in trend is at hand.

Waves can often be difficult to see in complex price structures, but when obvious do give added value to the overall chart interpretation. Oftentimes, the use of parallel channels on the data will make counting the waves easier, since each time the prices hit the top of the channel and turn down, that is a wave top. The touching of the lower parallel channel is the counter trend wave in an uptrend. The idea, of course, is to buy dips and sell rallies, so knowing where waves end and begin tells us where to buy and sell. The typical pattern looks as follows:



Usually waves can be identified quickly, through the use of parallel channels. The touch points of the channel lines are where the waves peak, and you can make a quick approximation of the number of zigzags that way.

Most waves form these 1, 3, 5 structures in the primary trend; that is a 5 sequence for a



main up trend and a 5 sequence when the main trend is down. If you see a dramatic movement of only 3 waves, it is probably a counter movement to the primary trend which will shortly reverse.

This idea of waves and parallel channels gives rise to a concept of *retracement levels*. Remember, our strategy is to identify the primary trend and enter our trade with the primary trend but enter it on the little counter trends. That is, buy the dips or sell the rallies. Obviously, the “dip” cannot exceed the primary impulse movement, or it would not be a dip. So, we watch for retracements. Retracements are usually 25%, 33%, 38.2%, and even 50%. Normal counter trend movements stop at these retracement levels and then resume the main trend again.

Our strategy, therefore, becomes one of judging the momentum of the counter trend correction into which we will make our entry into the trade. Then guess its most likely percentage and buy in (if it is an uptrend), placing our sell stop down at the percentage where we know we are wrong on our guess. For instance, if a stock advances from 20 to 30 and we think a 50% retracement is likely, we buy on a dip to 25 and use 22 (down 80%) as our stop, since a correction that big is probably not a correction at all but the primary trend and 20 will soon be broken. This strategy accomplishes two very important things and will be the key to our success as traders. First, it forces us to buy against the minor trend and thereby mitigates against our becoming emotional and impulsively buying just to satisfy our greed, but forces us to have a plan. And second, we can clearly define our risk on the trade to only a dollar to two. Whereas others may be holding stock from 30 and have a big loss by the time it hits 24, we only have a modest loss of \$1 and can easily handle that situation without getting emotional. When we later look at cycles, we will add a third element to the buy equation: time. That will further define our risk to a set number of hours of holding regardless of price damage.

Impulse Waves

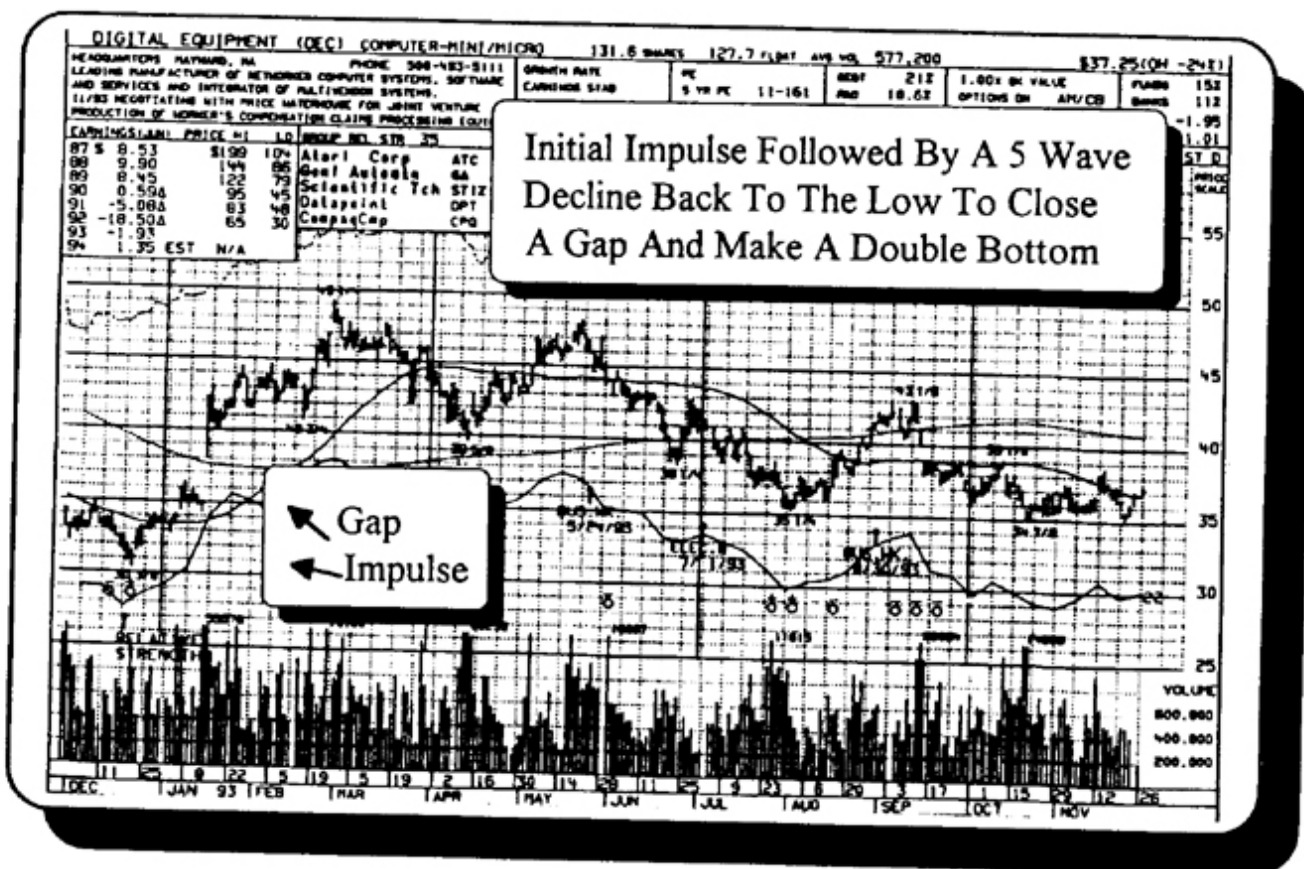
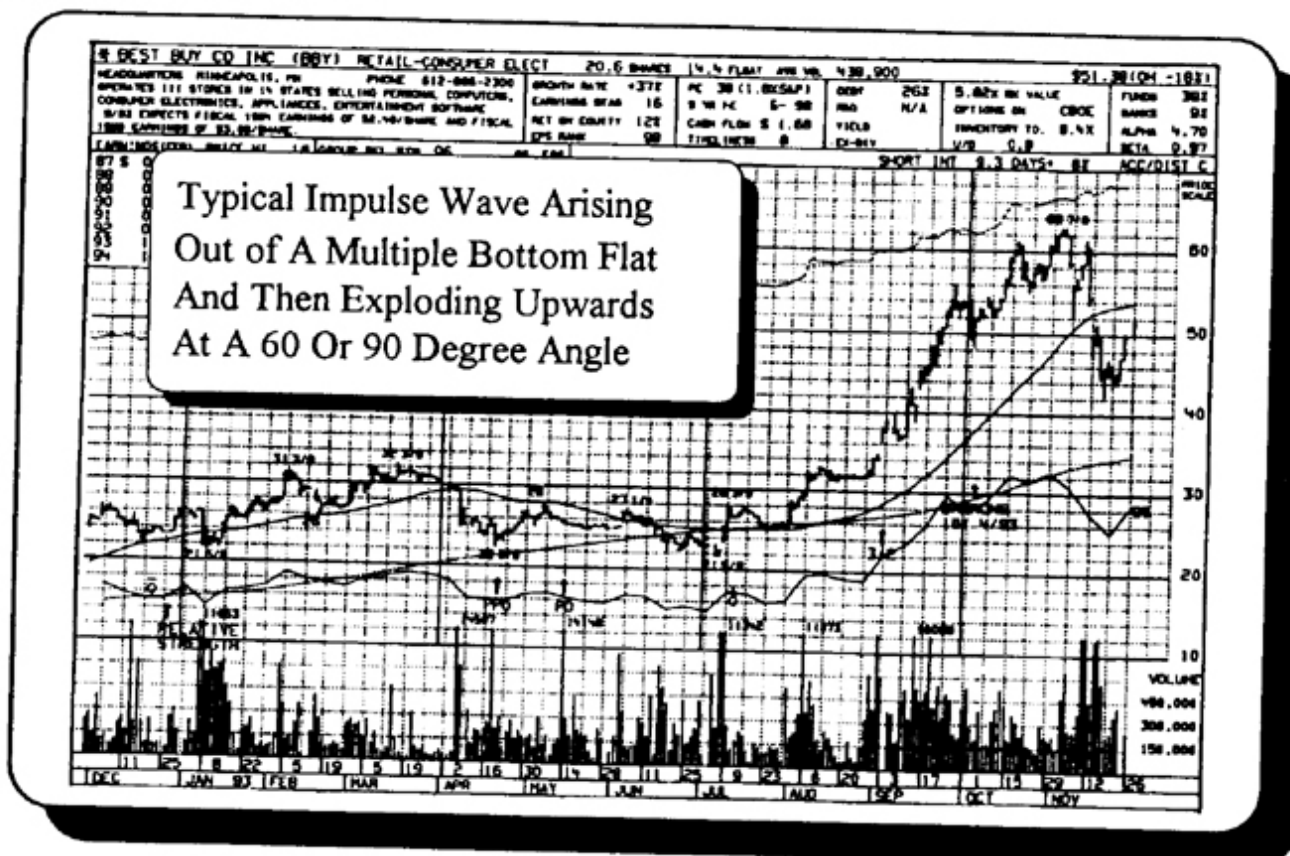
Impulse waves are the initial thrusts in each wave series. This first primary thrust can tell us a lot about future price trends and targets. Obviously, an impulse wave implies, by its very name, a powerful momentum thrust. When you see an impulse wave, do not think the current trend will reverse any time soon! Recognizing an impulse wave will keep you with the primary trend and even help identify it for you. For example, when prices seem to be randomly bouncing around in a flat, usually a big impulse bar will occur every so often. The direction this "big" bar takes points to the primary direction of the movement, even though it quickly seems to reverse. Unless you get a complete 100% retracement of the impulse, do not assume the trend has changed. These big bars are also often accompanied by "gaps" in the chart, and looking for gaps is a good practice when first picking up a chart. The gaps indicate extremes of emotions and big supply demand imbalances.

Remember that the purpose of identifying the impulse wave is to not only respect the trend, but once we identify it as an impulse, we know there will be five waves coming. So we can set up long term trading strategies to buy into waves 2 and 4 and watch for the end after five.

Impulse waves frequently rise along strong angles, such as geometric angles of 4 x 1 or 8 x 1. These big momentum angles are also a tip off as to the strength of the move in progress. In S&P futures trading as well as other leveraged futures markets, the big impulse wave bar on the chart signifies a time period to buy every dip over the next several bars on the chart. Trends usually persist, and the number of bars after the impulse that the trend continues is at least three bars but usually a fibonacci number like 5, 8, 13 or 21 bars in the same direction. It is nice to have the confidence that a move will last this long and stay with it, and identifying impulse waves gives us that.

The second major help impulse waves give us is for measuring the distance of the move. Usually, the final high or low is a multiple of the initial impulse distance. If the Dow Jones Averages impulse up 50 points, we could multiple that amount by ratios like 1, 1.618, 2, 3, 3.618, etc., times the initial thrust. Remember, also, our previously mentioned secret of laying the signal bar on its side horizontally to measure the time distance of the move.

Examples of Impulse Waves:



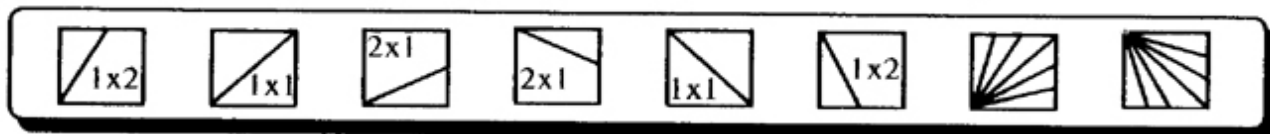
Angles



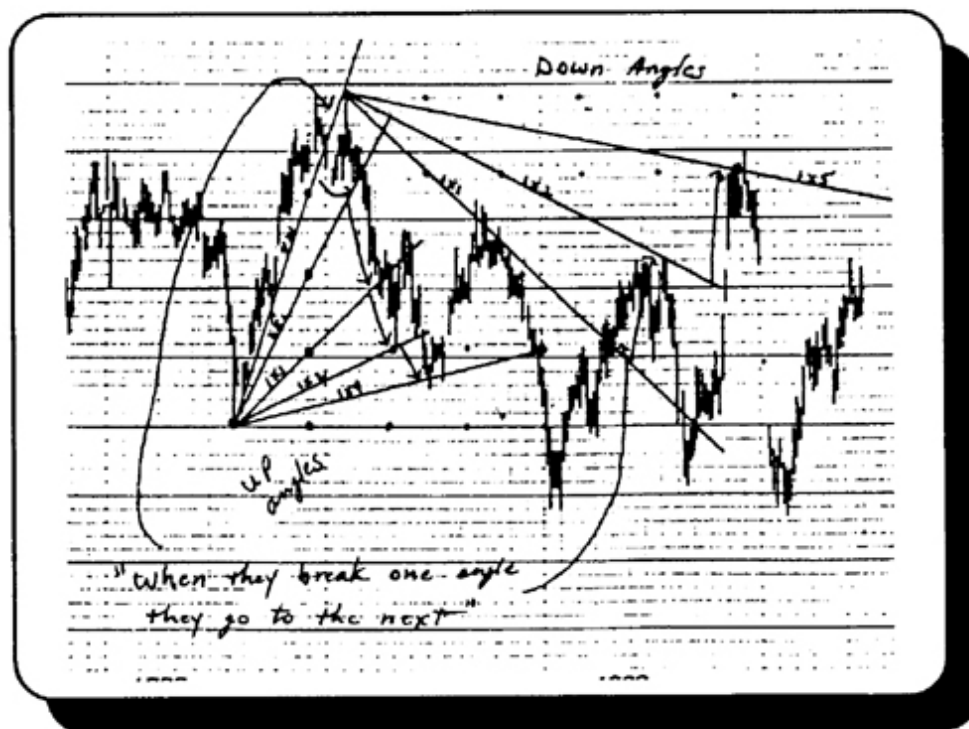
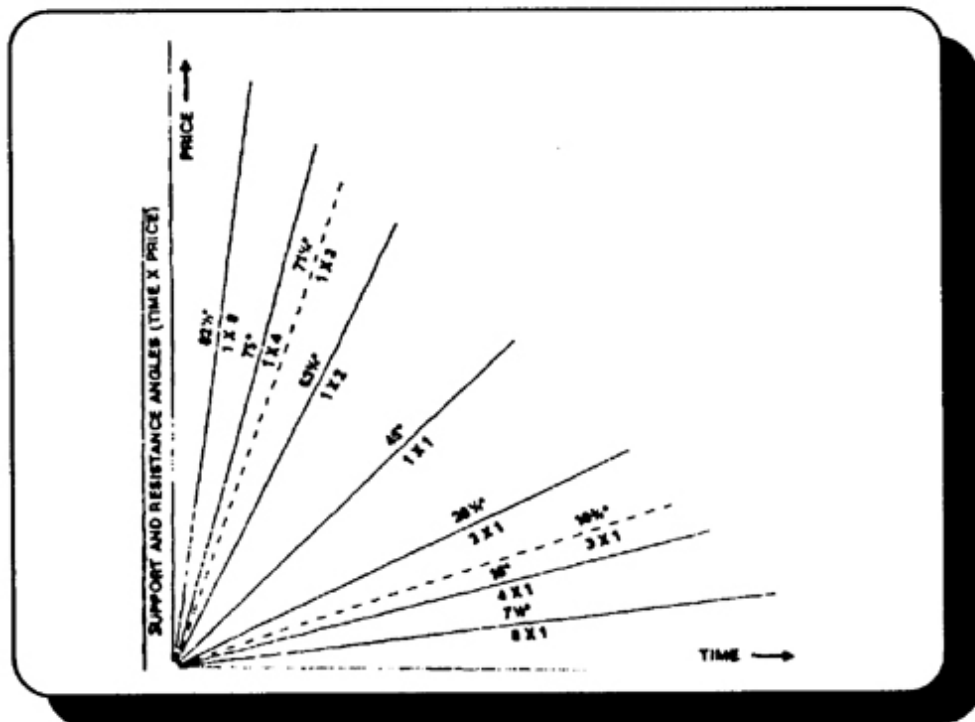
Retracements are easily calculated, and although you could spend most of your time calculating them and recalculating them, I cannot spend too much time in this book on such a simple subject. What I can point to, however, is a simple technique that actually keeps track of retracements automatically and requires almost no work. This is nothing more than angles. Not simple trendlines most traders use but “geometric timing” angles. These are called geometric angles because they subdivide time and space or price movements into proportionate fractional parts. These fractional parts are our percentage retracements, and when a geometric angle breaks, we know the trend will most likely continue to the next angle retracement.

The most basic correction is the 50% retracement. This is represented by the 45 degree angle. This angle is the diagonal of the square, and we know that a diagonal evenly divides a square, so we know it represents a 50% measurement. This angle is referred to as a 1 x 1 angle because of this equality of time and price.

One of the most difficult concepts you must grasp is the idea that time and price must *both* be accounted for. Remember, we are measuring vector distance of time and space, or price, so a sideways movement coupled with an advance or decline represents more than just the price movement. You will have to contemplate this concept long and hard if you want to make real progress. This is the reason that any price decline to a 45 degree angle represents a 50% retracement, no matter what the price decline has been. Along that 45 degree angle, *time and price are equal* with the origin point of the angle. We are over the exact same amount we are down. If a stock goes up 10 dollars, sideways two months, and hits the 45 degree angle coming up from the low, it HAS corrected 50% when it hits that angle. You may have to take a few years to contemplate the nuances of this principle, but for now please memorize it. Since geometric angles evenly divide time and space, they are represented as divisions of a square and designated as one by one, two by one, four by one, etc. These are the units up versus over or time and price.



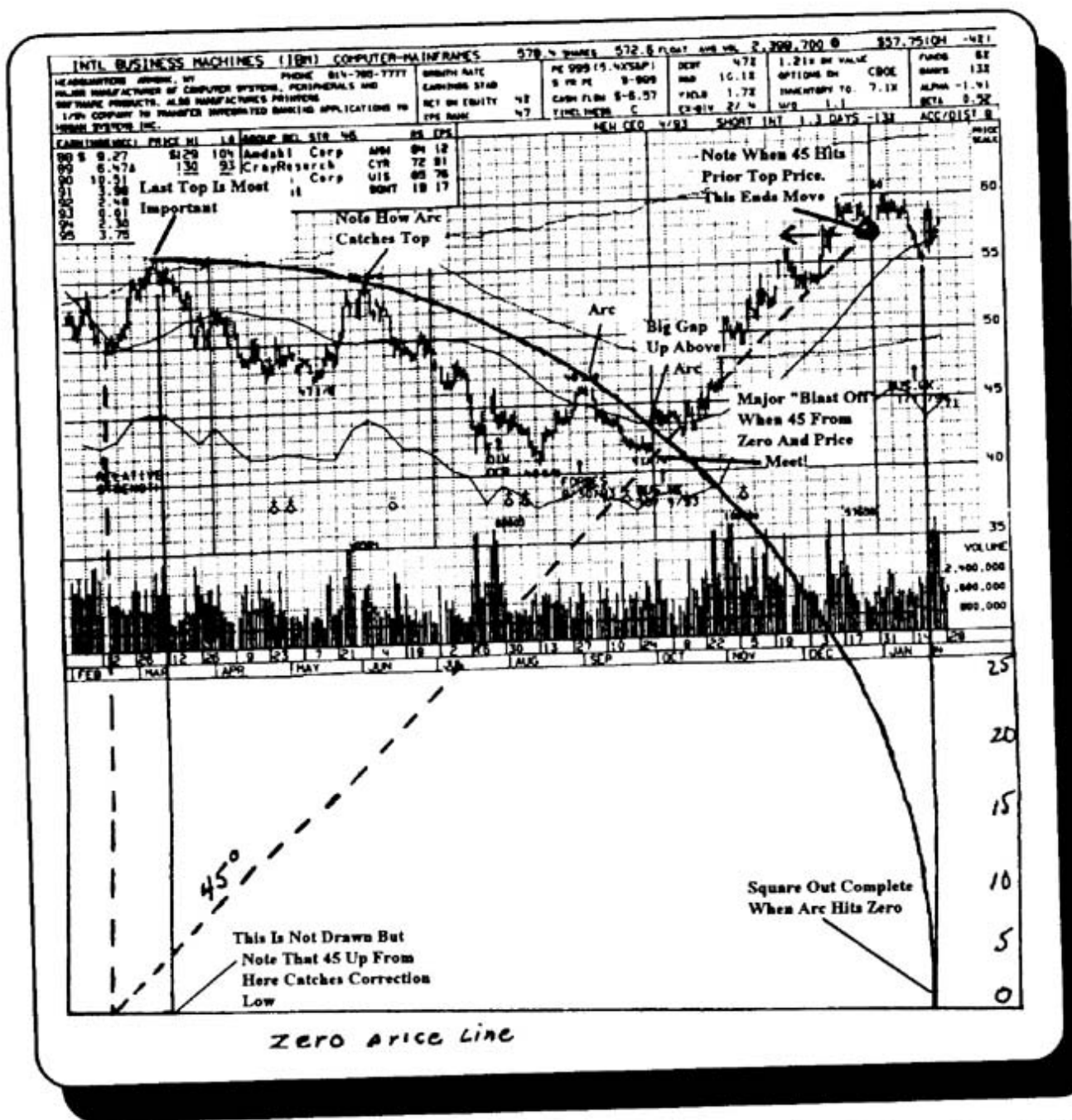
These angles are *timing* lines in that prices falling along these angles are at an exact fractional proportional movement from the origin to that point. The primary rule is that when you break one angle, you must go to the next. That can either be a drop or rally to the next angle or a long consolidation until the next timing angle reaches up to hit the current price. In either event, the current rate of advance or decline is over, and that would require a change in trading strategy. If one were to merely draw these angles with a compass, you would find the 8 x 1, 4 x 1, 2 x 1, 1 x 1, 1 x 2, 1 x 4, and 1 x 8 angles equal to 7.5 degrees, 15 degrees, 26.25 degrees, 45 degrees, 63.75 degrees, 75 degrees, and 82.5 degrees, respectively. This is shown as follows:



Angles are a very important means of measuring momentum and the *steeper the angle, the more powerful* the move. By measuring the steepness of angles, we are forewarned of changes in momentum and coming changes in trend.

Angles are usually drawn up from lows and down from tops, but timing angles are used to measure precise turning points *where they intersect price harmonics*. For instance, an angle drawn down from a top at 50 on a stock would identify a *time area* to expect a turn when it reached the major price harmonics of fifty, like 37.5, 25, 12.5, and 0. These are quarters of the price of 50, and even though the price itself may be located on the chart elsewhere, when the timing angle hits these important numbers, a turn is indicated in that time period. Major movements occur when time and price "square out" or reach the full price, such as a decline of the top angle all the way down to 0 or an angle started up from zero directly under the high of 50 and at a later time intersecting the price of 50. At these times, in particular with the 45 degree angle, time and price are in perfect balance, being over the exact number of units as the price was at the top. These "square outs" look like diagonals of squares and as thus called square outs, since they represent a square or balanced harmonic of the price. An angle coming down from a top and one coming up from a completely different lower price would intersect at the common mathematical vectors of the two prices, *and a major turn would be indicated at that point*. This is called "squaring the range" or the price difference between the high and low swing.

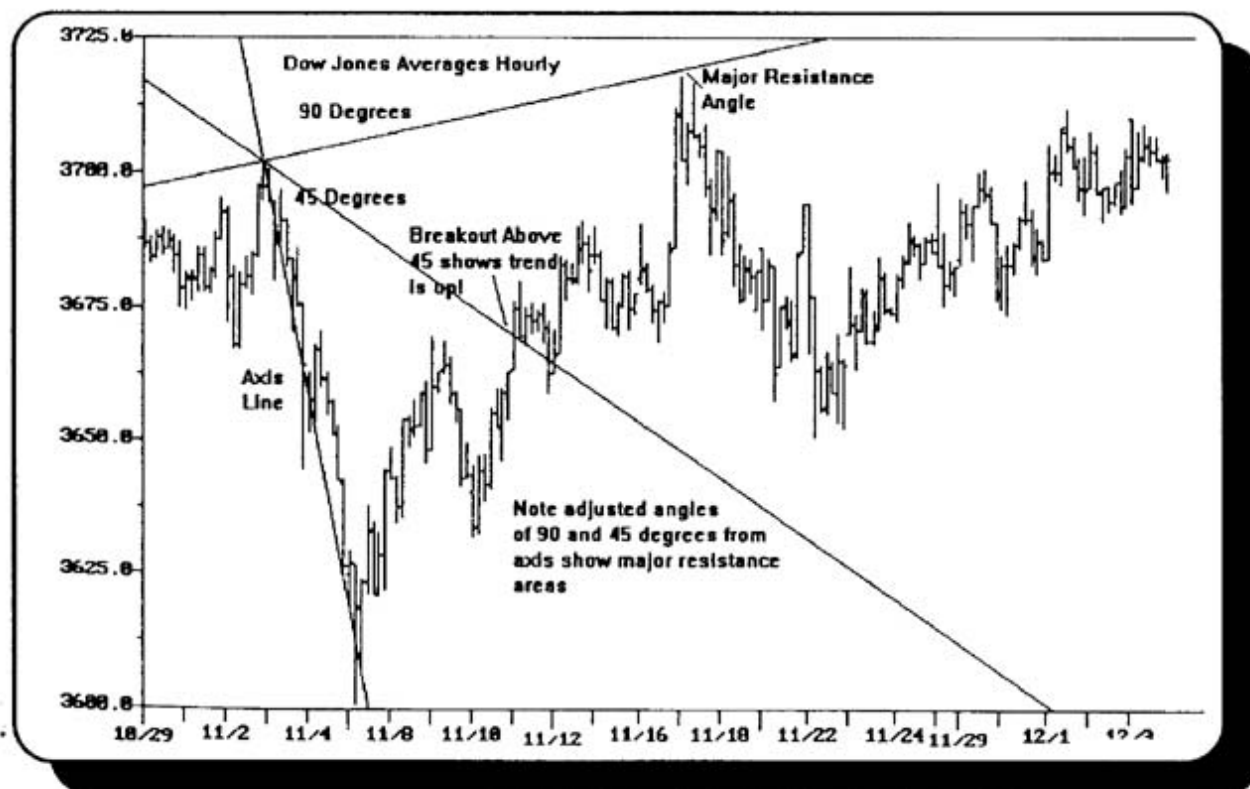
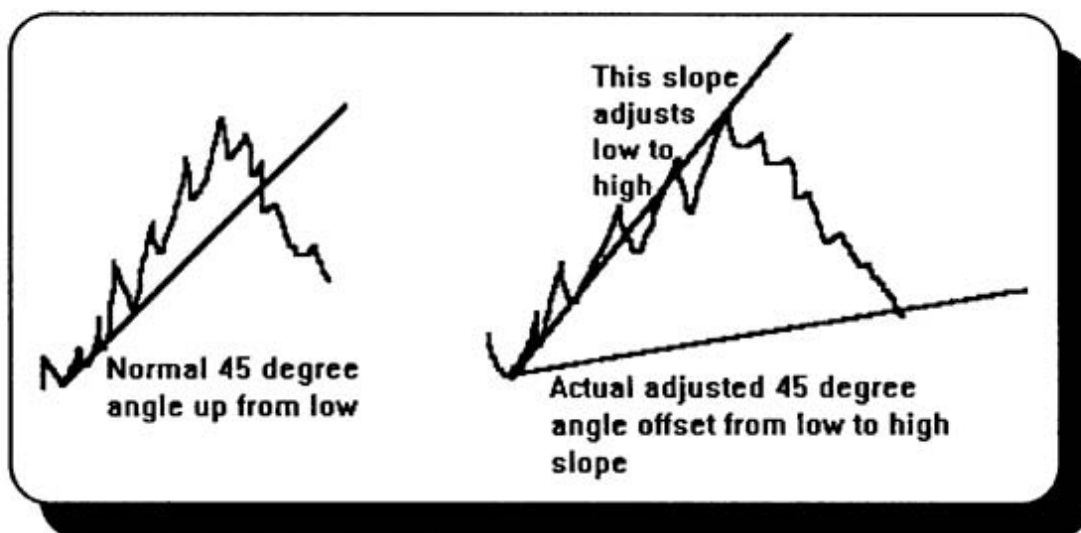
It is extremely important to draw angles *both up from zero and down from each high to zero to see major turns*. Most charts do not continue the scale down to zero but only use the relevant trading range. In these cases, you MUST find the location of the actual zero price and continue your angles until they reach that critical point. Additionally, an angle coming up from zero, starting under any high, will almost guarantee major support the first time it rises high enough to hit the current price level. The vast majority of traders do not do this and miss out on the easiest and strongest support point for the stock or commodity. Keep in mind that if your paper or scale does not have room to draw down to zero, you can "tic tac" back and forth / up and down at price harmonics until they add to the appropriate amount to reach zero. For example in the 50 price example, a 45 degree angle drawn from 50 down to its quarter point of 37.5 could then be turned back up to 50 again which would be the midpoint, then down to 37.5 again to represent 25% and finally back up to 50 to get 100% or the zero angle point. Most people do not realize it, but this is where you often find cycles of "x" units which are really just these tic tac harmonic points from a past major high or low being worked out. Whole books have been written on angles, and I hesitate to rewrite them, so I refer you to my other writings and other books on the subject. I urge you to do so because the information obtained will be valuable.

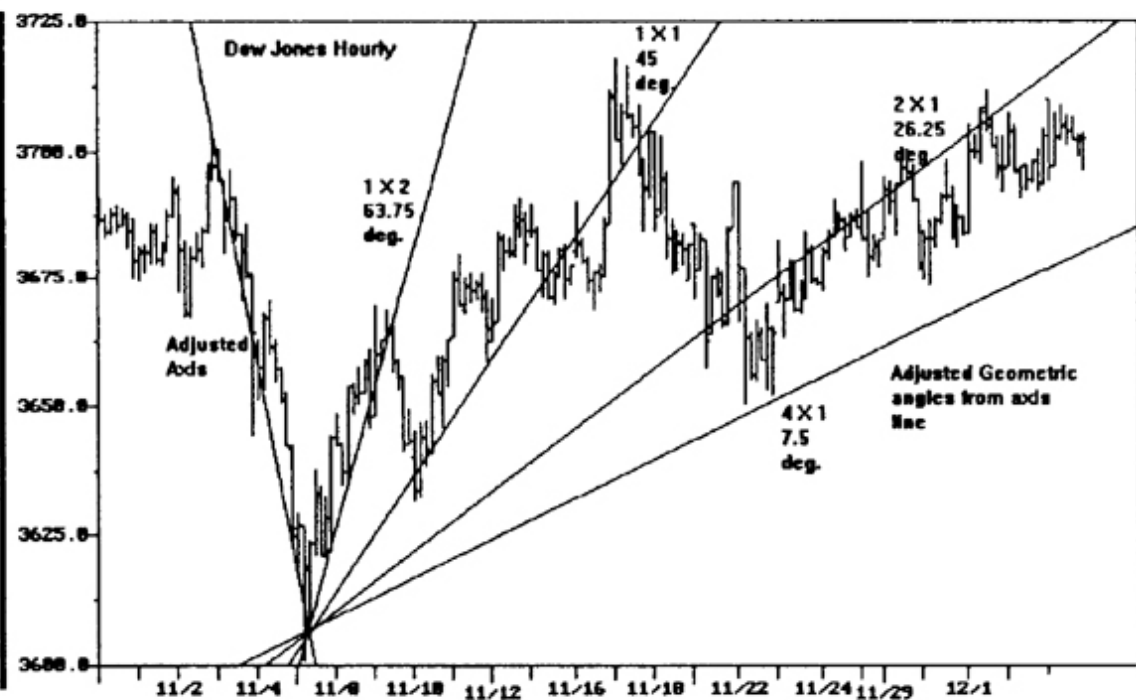


The above chart of IBM shows the importance of the "zero" angle technique. You should draw your angles up from the zero line under every major high and low of significance. When you do this, you will finally see for yourself why every single fluctuation into the future is accounted for by a fluctuation from the past. Please spend some time with this technique. It will change your life!

What is not shown on the chart, so as to not make it too confusing, are the 1 x 1, 2 x 1, 4 x 1, and 8 x 1 angles, or the 30 and 60 degree ones. If you draw these in, you will see some startling results. Also, remember that the 45 degree angle is the master timing line, so if you watch to see where this angle intersects the price harmonics of its origin price (about 50 in the above example), you will see turns at each proportional price level.

I would point out one other common misapplication of angles to charts, and that is the proper orientation. Just because we traditionally draw charts horizontally does not mean the prices are going in that direction. Remember to think in terms of *time* and *space* vector or circular distance. For example, most traders draw a 45 degree angle with a protractor from any high or low. This may or may not, however, be the right slope. The real geometric angle bisects a square, and the only valid way to get an accurate angle is to find the *directional orientation* of the side of the square first. This side in vector distance is a straight line from the last major low up to that high. *It is this angle* that the 45 degree angle must be offset against to measure true support or resistance. If you adjust your charts for this critical slope, you will see a major difference! For example:

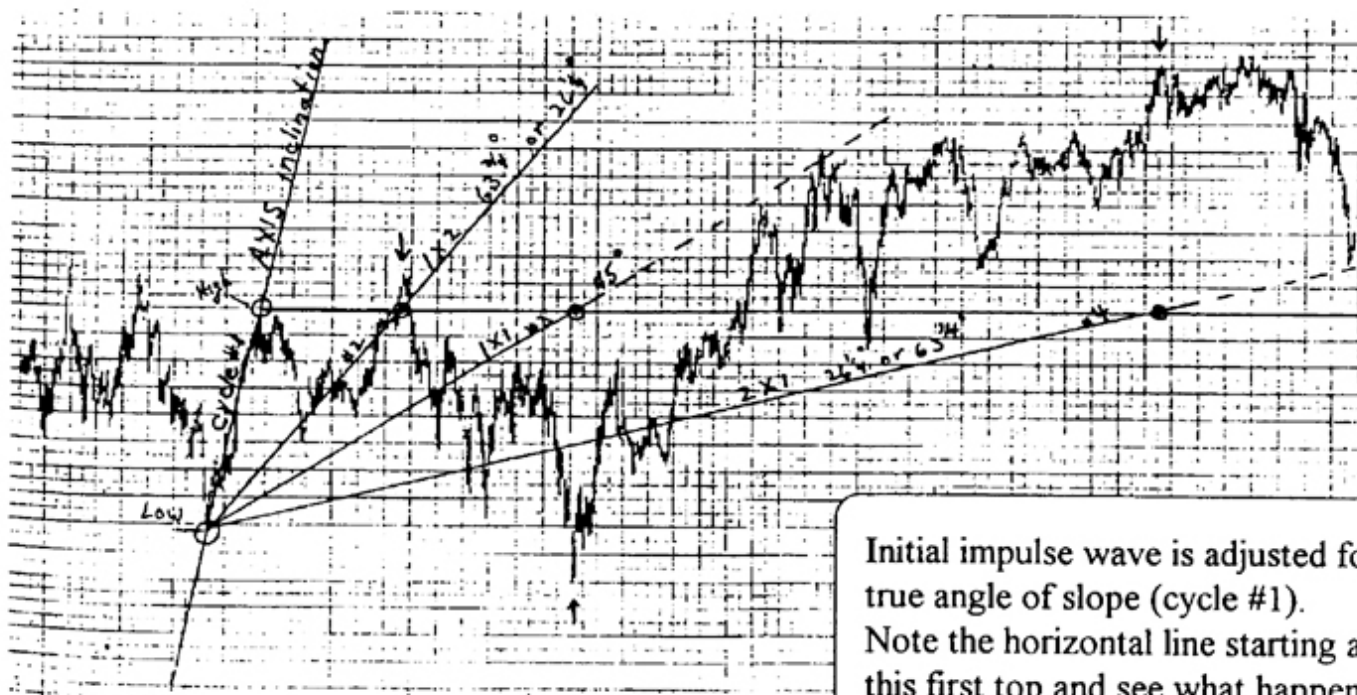




The important angles to use are the geometric angles mentioned previously along with the normal trigonometric angles of 30, 45, 60, and 90 degrees. The strongest angles of all are the 90 and 45 degree, in that order. All right angle (90°)

slopes hold powerful support and resistance levels and should be noted. Keep in mind that angles themselves, while useful, are much better analyzed in conjunction with our other tools, like circular arcs coming to an end at an angle or a signal bar reversal occurring at an angle. These tools, in combination, lead to very high probability trades.

Another very important point concerns **trading** off of angles. Most traders buy or sell when angles are broken, and this is often profitable. This strategy misses the point, however, that angles are really *timing lines or types of moving averages* and should be actually interpreted as *changes in momentum* rather than direction. After a timing line is broken, we should watch for a technical signal to prove that the trend has reversed before making a trade. The angle warns us of this but does in itself not *change* the trend. Remember that an upward sloping angle will be broken sooner or later, but that our definition of trend in a bull pattern is that of a *pattern* which makes *higher bottoms*. These bottoms are from a *horizontal perspective* so the price level could decline under an angle but not break low enough to violate a prior horizontal swing low, and we should remain long in the trade. Think about this, and you will see the most common mistake all traders make when trading off of angles. This principle is also the main stumbling block when deciding if a long term Bull Market has come to an end. To be sure, prices must break a prior swing low, but trendline angles are often broken hundreds of Dow Jones points higher. This is one of the main advantages to using cycles or circular arcs. In a cyclical analysis, we can make a highly probabilistic estimate that the top is in long before either angles are broken or swing lows reached. Nevertheless, swing lows usually offer strong support when reached, and a final bounce off of them usually gives one ample time to go short for a big break.



Initial impulse wave is adjusted for true angle of slope (cycle #1). Note the horizontal line starting at this first top and see what happens when each geometric angle hits that first top! These are the cycles!

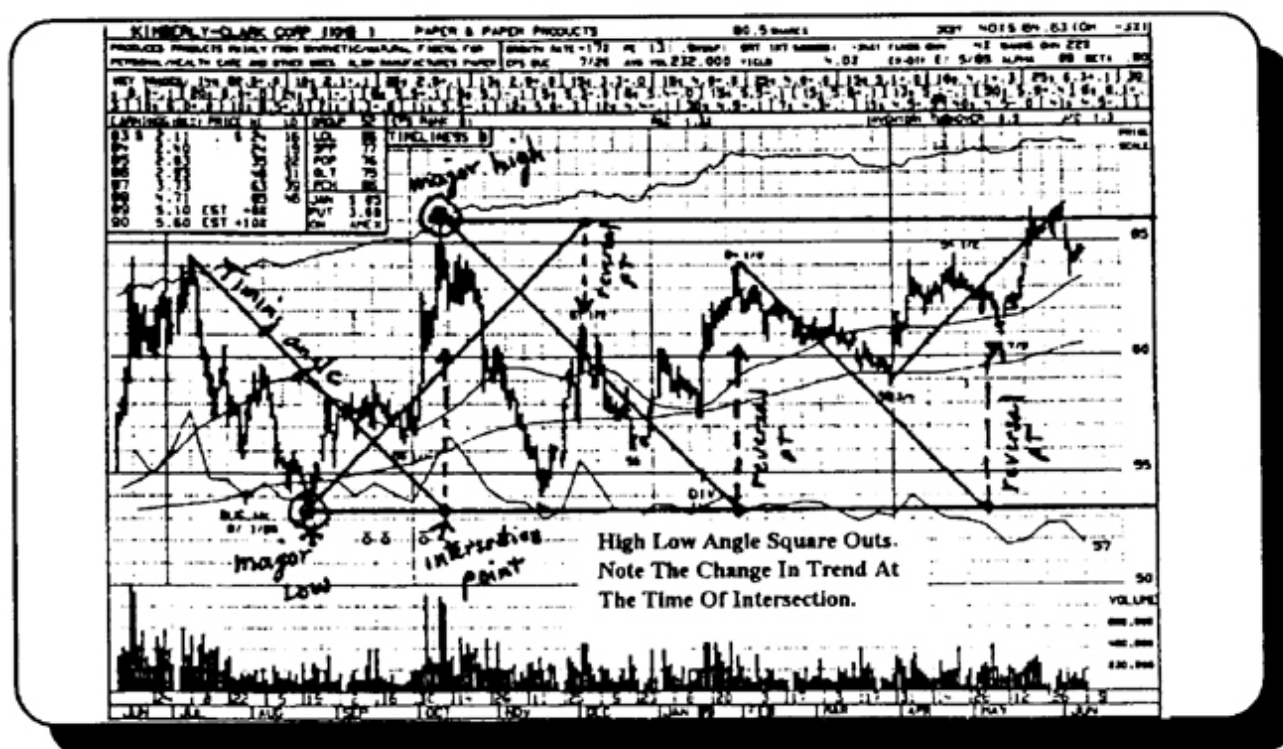
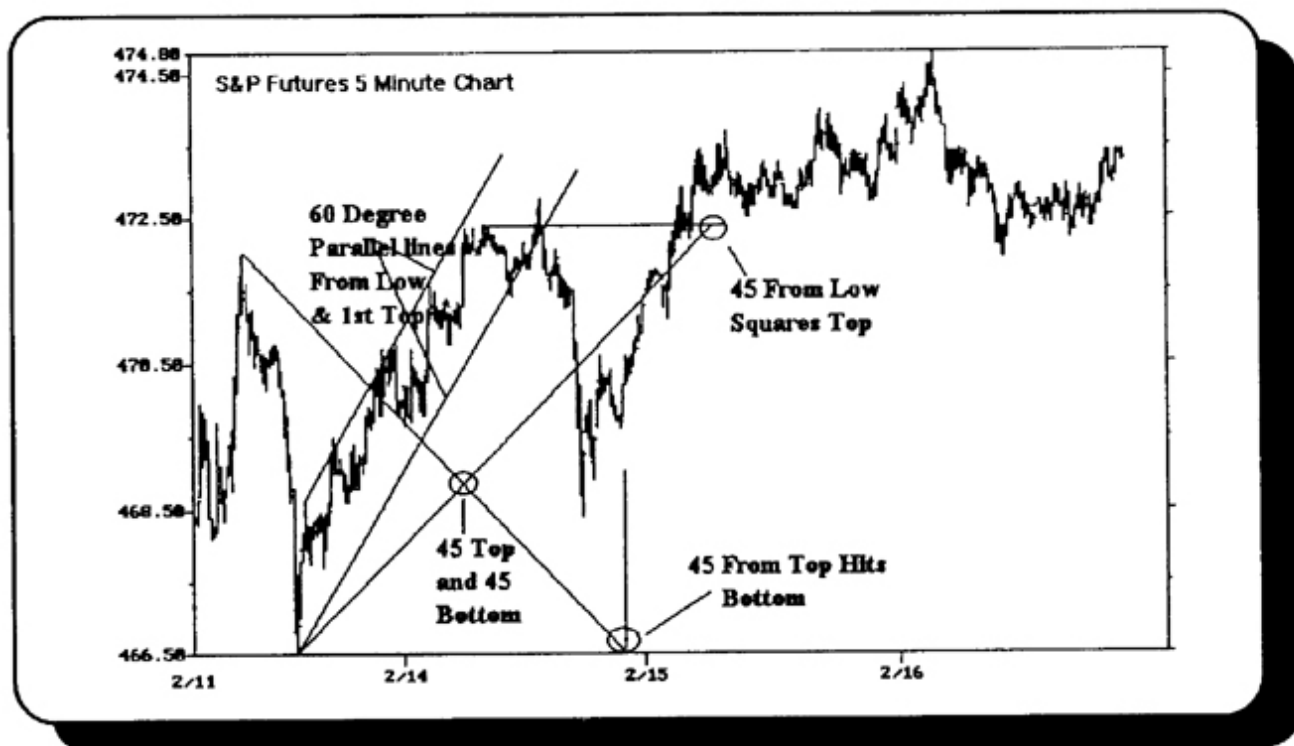
I spent a great many years of my life studying angles, and many a book could be written about using them. You must not assume they are not important just because I have only devoted a few pages to the subject in this book. My object here is to simply give you an introduction and hope you will follow up. Suffice it to say, the greatest secret of all technical analysis is to be found in the study of angles! I cannot afford to reveal it in a book such as this meant for mass exposure, but if you follow up on the ideas herein, you may find it for yourself.

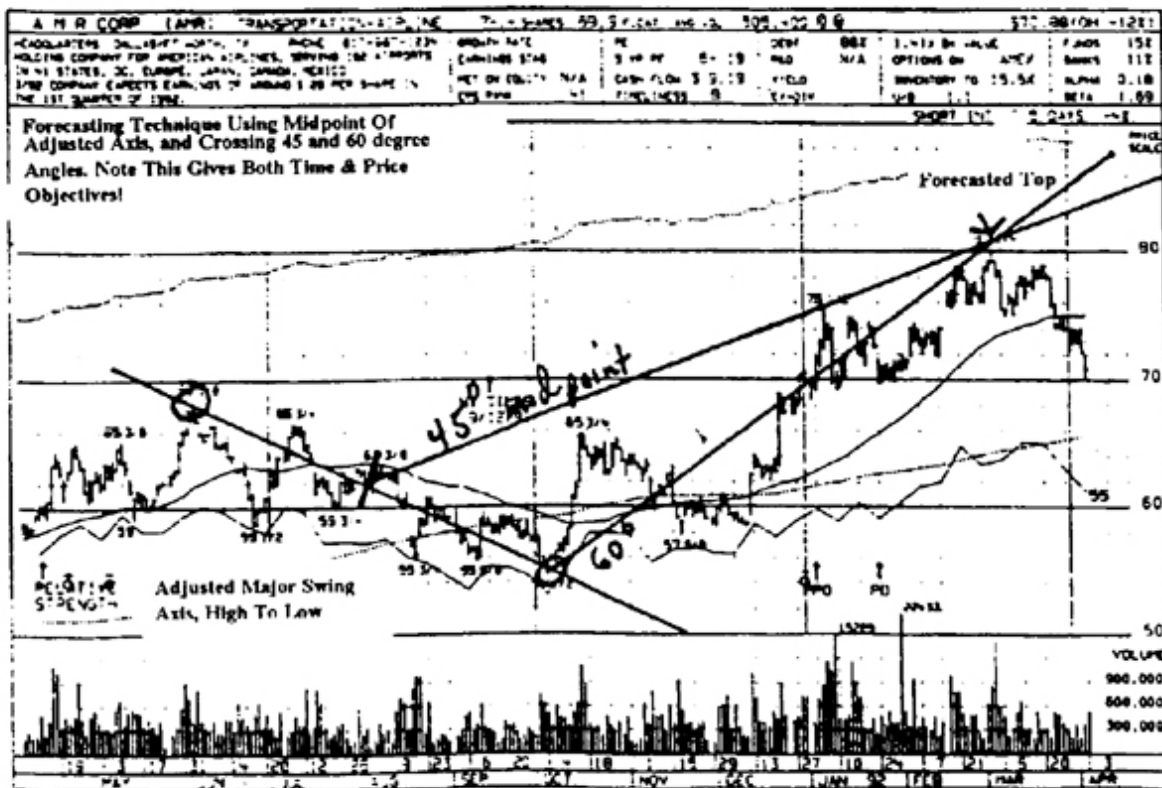
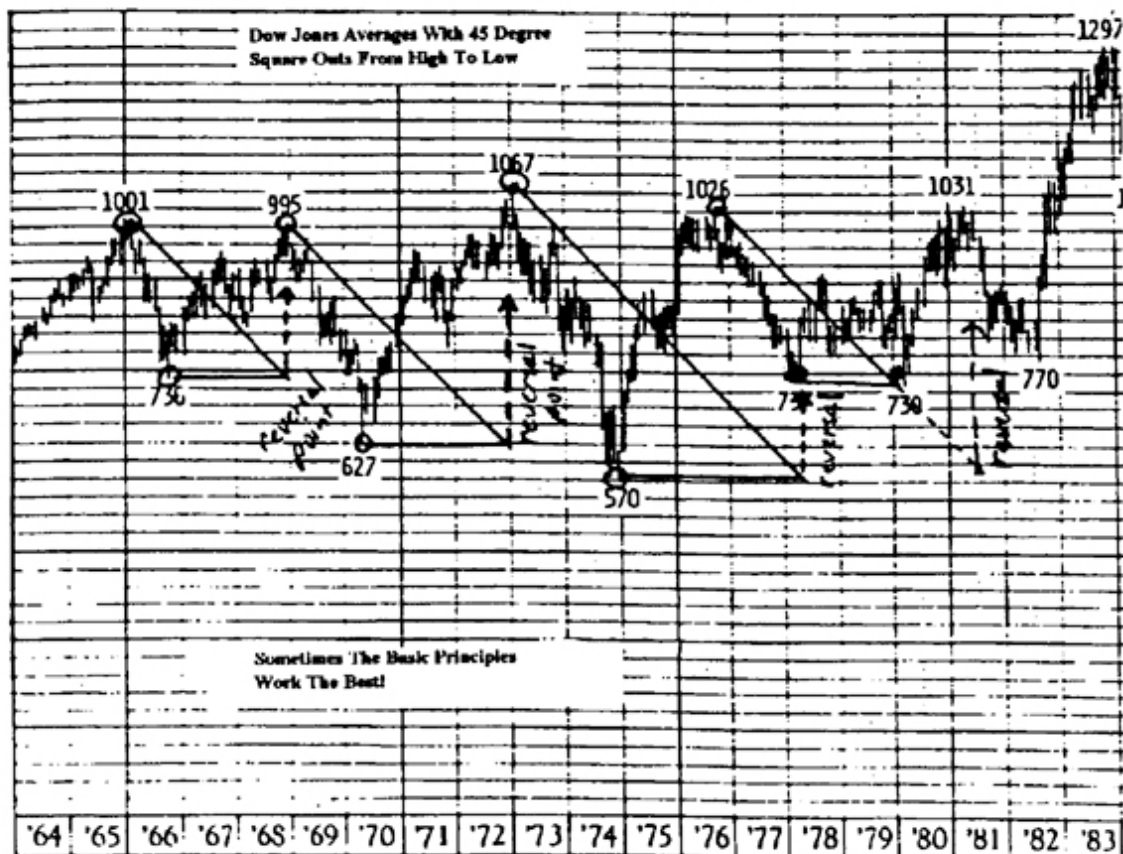
The following points are most important and need careful attention. Keeping in mind that time and price must be linked, and we must match up our natural calendar time with our work, you will note that the basic primary angles used for technical analysis consist of points per day, points per week, and points per month. All basic interpretation must begin with the geometric angles of 1 x 1, 2 x 1, 3 x 1, 4 x 1, and 8 x 1 in terms of days, weeks, and months. All bull and bear markets begin and end on these angles, especially monthly angles. It is the intersection of these angles from past highs and lows that bring our cycles to a common time and price point. I will not demonstrate this point in an exhibit because it is too valuable, and those not willing to do some work do not deserve to know the truth. You can take my word that it will work every time, if applied. From each beginning and ending of major bull or bear markets, you must start and maintain these angles.

Another point about angles concerns where to start them from, besides the obvious high or low. The theory of angles is that time and price are linked in an exact relationship, and our idea of measured moves of emotion fit nicely with the slope of angles describing those emotions. As a result, you will note that angles moving upwards from a spike high will define a future top. The emotionalism seen at the first top can never be exceeded, and so, if we draw an angle up from that top, the next time that angle is reached that same emotional extreme will again be reached and the market will top again. The same technique is applied to the initial spike lows in a downtrend. Angles declining from such lows will define the emotional extreme and will "catch" future drops when prices reach those levels. Typically, we use the 45 degree angle as the primary guide, but in big momentum moves steeper ones may be evident. Parallel channels are often formed by these 45 degree angles coming down from a top and likewise coming down from the first bottom or last bottom just before the top. This parallel channel will define the downward movement. The upward parallel movement is created with an angle up from the low and a parallel one up from either the first top or the last top just before the primary low.

When using angles for time and price change "square outs," you will note three primary square out intersections. These are the 45 degree down from a top intersecting a 45 up from a low, the 45 down from the top hitting the bottom level, and the 45 degree up from a low hitting a top level. Indeed, each past high and low will create cycle turns when angles down or up from those levels intersect. Since these intersections are numerous, we want to concentrate on only the larger ones for their greater influence. This is implied in the prior paragraph when I mentioned that all bull and bear markets begin and end on these angle intersections, particularly *weekly* and *monthly* angles!

Examples of angle techniques:





The Hourly Chart



The primary chart used for forecasting and day trading the markets is the hourly chart. This is simply a chart where each period bar is one hour's duration. There is some debate as to how many hours should be in a daily hourly chart. At present the stock market opens at 9:30 AM and closes at 4 PM, or a period of six and one half hours. Many people use 10 AM as the first hour even though it is only a half hour. Others use 10:30 AM but end up with an extra half hour at 4 PM. The correct solution is to use a half hour chart since that correctly shows each period in an equal fashion, but the half hour chart is not as good for long term forecasting. My method is to use an hourly chart with six hours in a day with the first hour being 11 AM. This gives the first hour one and a half hours, but this is far superior to the 10 AM method. Many times that first half hour ending at 10 AM does not include all the openings due to delays. Additionally I find that a half hour is simply not enough time to get traders to make a commitment for the morning. I have found that it takes about 45 minutes to a full hour to get day traders to commit and readings taken before that time period are often erroneous. Specialist openings where the specialist manipulates his stock up or down artificially to get rid of, or purchase inventory, also affects the reading. This is done at the opening but is still often going on by 10 AM. I find that the 11 AM reading represents a smooth continuation from the prior day's 3 to 4 PM hourly reading while the 10 AM usually gives an erroneous one that is erased by 11 AM. Suffice it to say I have made a study of the two charts and the six hour chart is infinitely superior. After several thousand hours have passed from a major high or low, the six hour chart still turns the market at the calculated hour, whereas the seven hour does not.

I think a lot of the basic truth behind this has to do with the numerology of the number 6. This is one of the master numbers. In Genesis, God worked for six days and rested on the seventh. Six times six is 36 and ten times that is 360 the perfect circle and number of degrees of all cycles. I could go on and on about the number six but will have to leave some of that work to you. Basically in this book when I refer to an hourly chart it will have six hours noted in a day. Those hours are 11, 12, 1, 2, 3, and 4 PM Eastern Times.

The reason these hourly times are important is that trading can be very precise and the market will turn at cyclic intervals that are extremely precise. I have seen hourly culmination's to the exact hour several thousands of hours after an important high or low. For example if the Dow Jones had a major high at 3400, you could bet anyone that EXACTLY 3400 HOURS later a major turn would manifest in the market worth trading. The reason for this is not the purpose of this book but is covered at length in my other works. Incidentally I doubt many traders other than myself know this fact, but in August of 1982 the Bull Market started from a Dow Jones closing low of 770. In August 1987 when the market topped it was 7700 trading HOURS from that low! Coincidence?

As traders we know the famous Fibonacci sequence of numbers that are an additive series starting with 1 and adding each number to its neighbor to get the next number in the sequence. It goes like this 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, 144, 233, 377, 610, This sequence has the important property of demonstrating the golden ratio between its adjacent members (divide any two adjacent numbers into each other and you get 0.618 and 1.618). The golden ratio 1.618 has for all eternity been considered one of the key building blocks of the universe and shows up in all of nature, mathematics, and stock and commodity market data. The lengths of various market movements are often Fibonacci ratios, and the simple absolute numbers mentioned above usually manifest like clockwork in turning the markets for trading purposes when using an hourly chart. That is to say that from every high and low we count 1, 3, 5, 8, 13, 21, 34... hours, and we will find that most of the turns will come almost exactly on one of these Fibonacci hourly counts. It is extremely important therefore to keep track of these counts on our charts. Most people are shocked at this simple fact when it is first pointed out but I assure you it is true and has worked for hundreds of years that I have examined data for. This greatly improves our trading since we now are not afraid of a reversal each and every hour that we are in a trade. For instance if we buy into a dip and the market does reverse back up, when do we sell? Most traders become shaken out of a position the very next hour with a small profit. Using Fibonacci hours, however, allows us to only take a look 3, 5, 8, or 13 hours later and forget about worrying about the other hourly intervals. If the market goes into the sixth hour, we will expect it to go at least to the eighth, and if into the ninth, it will go to the 13th. I cannot emphasize enough how valuable this information is when trading futures and options. My experience is that the vast majority of day trading moves last 13 to 21 hours. If you make a habit of paying close attention to hours 8, 13, and 21 from major turns, it will improve your trading dramatically.

Our basic strategy is now refined to looking for an entry point with a reversal bar signal, then counting our hours paying attention at the Fibonacci turning points, noting if circular arcs or trendlines intersect at certain time periods that also correspond to a Fibonacci time zone and therefore hold high promise for a turn in trend. We also need for future reference a continuous count of the exact number of hours transpired from each significant high or low over the year. Major market moves occur at 100 hour intervals but particularly at the 500 multiples like 1000, 1500, 2000, 2500, etc. Also of greatest importance is the long Fibonacci counts of 1382 and 1618 hours. You will be startled if you examine these facts.

Since these Fibonacci hourly turns work all the time, it sometimes can get confusing as to which hourly turn is the most important. The rule is generally the longer the sequence the more important the turn. Three and five hour movements usually cannot generate enough momentum to make big profits, but 13 and 21 or more hours in a trend is a good move. (Remember with 6 hours in a day a 21 hour movement is over 3 full trading days!). Additionally, counter trend movements will usually manifest for a Fibonacci period one or two less than the main trend, such as a counter trend starting at the 13th hour and lasting 8 or 5 hours, not 1, 2, or 3; and a 21 hour turn giving rise to an 8 or 13 hour reversal.

Each of these main trends and counter trends arises at Fibonacci intervals and this leads to another important observation rule. This is, that at major turns worth trading we will see *clustering* of many Fibonacci turns. For example we may want to mark on our charts the Fibonacci hourly sequence ahead of time well into the future so as to be prepared for future turns. From each high and low in sequence we make a "tick mark" on our paper every 1, 3, 5, 8, 13, 21... hours from each swing. What we will soon observe is time period clustering such as 13 hours from a low coinciding with 55 hours from a past top and also 21 hours from another top. In this case we would have three turns (13, 55, 21) all coming due at the same hour. That hour will very likely be a major turn of significance. To plot these efficiently we usually make up a tape measure consisting of a strip of our graph paper taken off the bottom edge and on this tape we mark each Fibonacci hour of 1, 3, 5, 8, 13, 21 out into the hundreds if not thousands of hours. We then merely line up this tape across our chart and quickly tick off the times from each high and low in sequence and note the clustering. Additionally this method affords us the opportunity to run the tape BACKWARDS with the zero time at the present hour and the Fibonacci hours going back into the past in an effort to observe whether past highs and lows line up on the tape. If that happens and we have several "hits" we know the current hour is important. Usually this method will pinpoint a time soon to be reached in the future where numerous hits will coincide and we can be ready for it. As market movements expand along the Fibonacci number sequence, we will also observe contraction along this ratio also. Using the tape measure approach backwards warns us of these contracting phases. Note also another technique that arises from this. Since the Fibonacci series is additive and each number added to its neighbor eventually yields the golden ratio of 1.618, you should be aware that ALL additive series eventually end in the Fibonacci series or golden ratio. Even a series like 11 plus 50 equals 66 plus 50 equals 116.... will eventually yield a ratio of 1.618 of each number to its adjacent number. Knowing this we can project future turns by multiplying 1.618 times the time interval between two adjacent highs or lows, or even a high and low, and the subsequent time period indicated will be in Fibonacci ratio to the two and give us a turn. Likewise we can ADD the two time intervals between three points to get the forth point in time! This easy technique should not be overlooked.

A more practical aspect of hourly chart reading is to note the intra-day highs and lows each day paying attention to the hour. A good method is to construct on a separate piece of paper a table with the hours 11, 12, 1, 2, 3, 4 and check off each as to whether a daily high or low was seen on those hours. As each day goes by and these columns are lined up, you will soon note two to three day patterns of strong openings and strong closes and which midday hour is the usual low. These intra-day patterns follow almost exactly for three days at a time and then reverse almost precisely at the opposite hours. You will then note that which ever hour mid-day is the low or high hour, that hour has very good forecasting ability as to how the day will end and whether or not the following day will be up or down.

The common pattern is for bull moves to show strength early and late. This means a strong opening and a strong close. The midday is the counter trend pull back. Most bull moves have an up 11 AM hour, a mid-day decline and a strongly up 3 to 4 hour. On a slightly larger scale, a weekly bull trend will have a strong Monday, Tuesday, and pull back into Wednesday, Thursday morning, then a strong Thursday afternoon and strong Friday. The bear trends are just the opposite. Please note that these patterns are "nested" so based on strong Monday we could then forecast a possible up week and expect hourly strong turns at 11 and 3 to 4. When these hourly turns first start to miss the mark, we get early warning that the daily pattern may be turning and that in turn may change the whole week's character. It goes without saying that you should note these patterns when entering trades to set up your entry and exit strategies on more than just a trendline break or circular arc. All technical tools and time cycles will fit together when you have made a correct analysis.

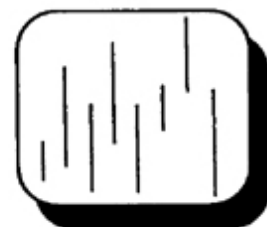
Perhaps the most basic principle of hourly trading is to respect the Specialist. On the floor of the NYSE this man opens and closes the book on each individual stock and can clearly see all the floor brokers standing in front of him. His job is to make money for himself and to avoid risk while having at times to take in inventory he does not want simply because that's one of his responsibilities to go counter to the market and provide liquidity. The opening price and the closing price are therefore very important to note especially from a vantage point several hours later in the day. As a rule of thumb you never want to buy stocks that are lower than their opening level and this can usually be extended to their 11 AM print. In these cases the Specialist often sees many sellers around and quickly opens his stock up on light volume before the sellers put in their orders. He then shorts the opening and lets the sellers work the stock down all day where he covers his short at a lower price. When he opens his book down it frequently means there are no sellers around and he wants to attract some sellers so he can buy their stock. These principles lead to the strategy of buying stocks down on the day perhaps a dollar or fifty cents BUT which are not below the opening level (i.e., they opened on a gap down). These issues usually come back to close unchanged on the day with a big up opening the next day where you would normally sell. Compare this with a stock that opens unchanged and then goes down fifty cents on the day. This is usually a case when sellers have entered the market and will be there for quite some time.

Also note that on big down days, nobody, especially the Specialist wants to own stock. As a result he will usually "be stuck" with inventory by midday and knows if he does not get out of

it he will end up with a lot more at the end of the day when day traders stick him with market-on-close sell orders. As a group the Specialists then usually engineer a late midday rally to attract shorts to cover thinking the market's going up, the specialists then sell out and go short themselves to get ready for the closing sell off. The end result is the normal pattern where in a downtrend that closes at the low of the prior day (meaning the Specialist was forced into buying on the close) the openings the next day are frequently up on light volume as the Specialists work quickly to get rid of the inventory and set up shorts for the day. Because of this you will almost *never get a reversal buy signal from an up opening after a weak close*. However, when you get another down opening, you can get a reversal buy signal. In these cases the Specialists come in with stock from the night before but do not see any sellers. They then open their stocks down to "test the waters" to see if sellers are there. If not, they hold onto their inventory and proceed to mark it up to hook shorts into covering and get the rally going. It is these natural and normal inventory adjustments by the Specialists as a group that often profoundly effect the market but whose actions clearly show up in an examination of the first and last hours.

Similar to the Specialists are the large institutional stock brokers in their combined effect on the first and last hour readings. In the normal situation a large mutual fund calls a broker and gives him a 100,000 share order. The broker seeing a large commission is impatient to get the trade done knowing that unfinished orders are often canceled by the fund manager and the commission escapes. In these situations (almost always) as soon as the market opens the broker forces the trade to get at least 20 to 30,000 shares done. Once he reports that back to the fund manager essentially notifying him it is too late to pull the order, he only then becomes "responsible" and tries "to work" the order for the customer to get him a better price. If its a bullish day he will just lay back for a few hours to see if any stock comes in for sale, but by 2:30 he's getting worried that if he does not complete by 4 he could lose the remaining shares the next day so he usually get aggressive and forces the issue from 3 to 4 PM. In the "old days" when being a stock broker meant having some integrity the broker would simple lay back and bid for very small amounts of stock not forcing the issue and often the order could take a week or so to fill but the markets would be less volatile and the customer would get a better price. Of course the funds are themselves to blame for this practice by having driven the average commission down to 2 to 3 cents on size orders compared with former 10 to 18 cents. The result has been a brokerage community which no longer cares for the customer's orders since they are not profitable but who now trade for their own accounts against the customer's order. In any event intra-day patterns particularly the first and last hours need careful study.

Emotional Charts



Often I see a chart, frequently an intra-day hourly, or even five minute chart that looks extraordinarily volatile. I often remark at these times that the chart is *too scary to go down*. When you see frequent whipsaw moves in a chart it reveals emotionalism where the participants, both buyers and sellers are nervous. The rule of thumb is that the chart eventually breaks out or breaks down in the direction that it is gradually trending. The vast majority of these patterns occur just before big up moves, especially if the series of plunging lows are each slightly higher on each successive plunge. This emotionalism usually forces one side or the other to capitulate and reverse position during a runaway *straight-line* move, just after the emotional period. After *that* move, the market usually reverses and the original nervous players finally are proven right.

On hourly charts I find that the most powerful moves are always preceded by a period of a few days of extreme emotional up and down reversals. I now have learned to seek out these patterns knowing that their resolution means a quick and certain big move. These are the kind of moves you want to use leverage on such as with futures and options. Many of these are short covering squeezes where the entire futures pit is betting in one direction but uncertain. Often one short covers, driving the market up only to have a new short put on a big position and send it right back down. Only after everyone eventually gets short is the entire pit trapped, and a stampede usually results. On individual stocks these up and down choppy periods are the tug of war between the last of the bears and the new bulls on a busted stock just before a new bull leg up.

The key seems to be five alternating higher bottoms to be certain that a genuine uptrend has actually started. On an hourly chart, as soon as I see at least five higher bottoms after a major break, I know the uptrend has resumed. These higher bottoms naturally require a good 12 to 18 hours of activity, since each minor fluctuation might last one to three hours before reversing and in order to get at least five consecutive higher bottoms on plunges, we also need at least four rallies up that fail. Five is the key number to remember. Many a market movement lasts until three bottoms have been made and then collapse, and occasionally four higher lows are seen, but when five bottoms are seen it is almost a certainty that the trend is up. This is a most important principle of investing and will make you huge amounts of money if paid attention to. Most traders think a trend reversal can only occur after a price level is exceeded or a downward sloping trendline from the last top is exceeded. We know from our basic trend principle, however, that the trend is a pattern of higher bottoms and higher highs for an up trend and this pattern may appear significantly

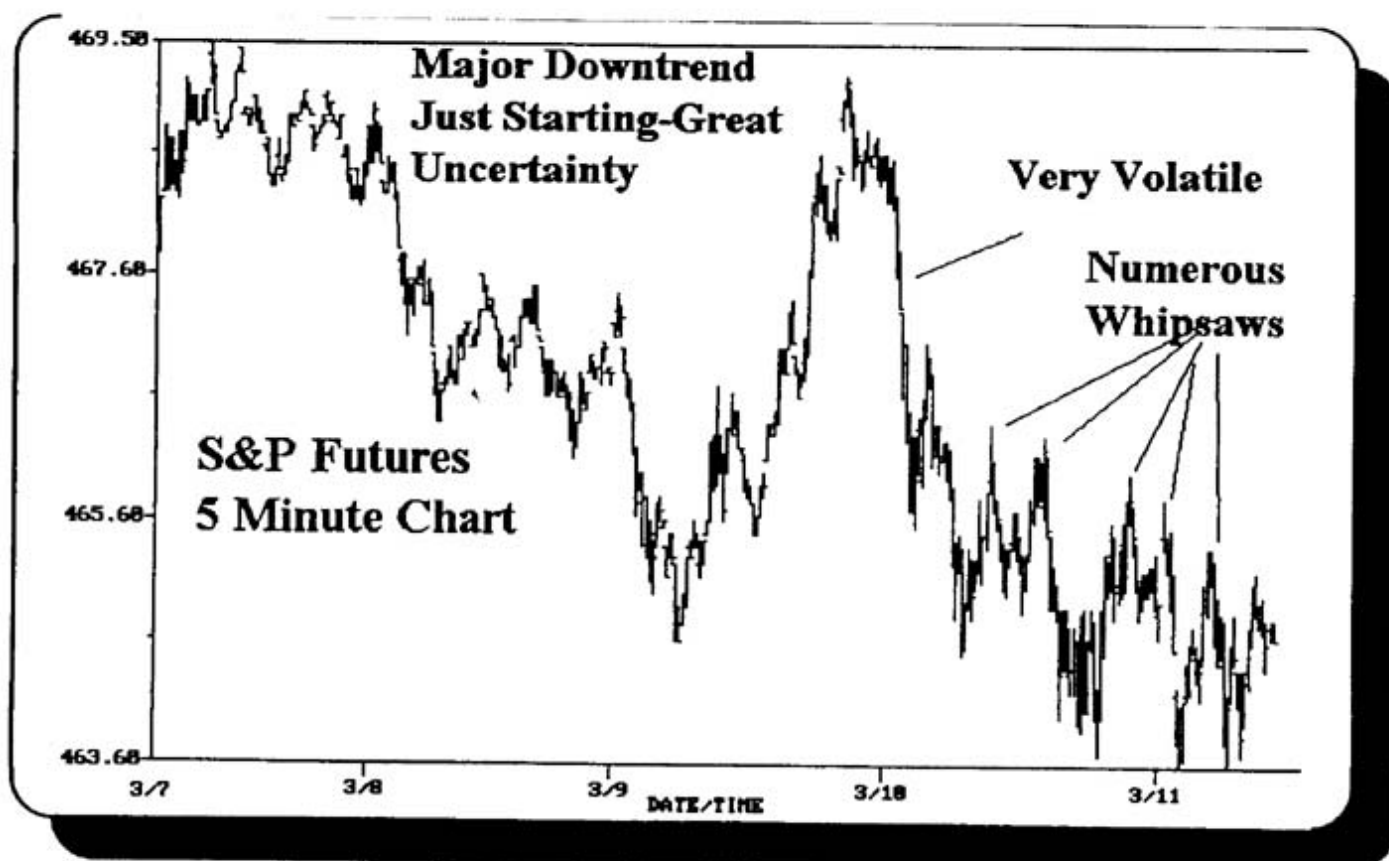
below any resistance level from a trendline. In these areas I often find myself comfortably invested while most traders are nervously waiting to see if the trendline will be exceeded and are often forced into breakout buying just when they should be selling. Option premiums at these levels are likewise very favorable.

Always keep in mind that the “wiggles” on the tape are emotionalism of the crowd and if examined from the safety of an analytical vantage point a sensible trading strategy can often be constructed with an almost certain knowledge of the trend.

Most intra-day patterns have an emotional tug of war during the mid-day hours of 12:00 to 2:30 PM EST. These daily emotional patterns are caused by the pit day traders who never know if the market will reverse on them or not. In these cases it is helpful to note where the emotional action takes place. That is whether it is a consolidation zone just above a breakout or is it a consolidation just after a breakdown. The odds usually favor a resumption of the major trend in these cases.

One of the easiest trades is when emotional trend reversals take place within a powerful upward sloping parabolic arc formation. This is the last acceleration phase just before an important top and the market is afraid of heights or just the number of consecutive days up the market has had without a technical pullback. In these creeping moves it is almost a certainty that a huge up move will take place to stampede the market into a “blow off top” where everyone capitulates and simultaneously goes long. It is amazing to see that these patterns so feared by traders have so little risk from a stop loss viewpoint. These moves are rapidly climbing a parabolic arc that is clearly defined and a simple sell stop placed below that arc is almost never hit until the final high is in. That trade appears to the participants too dangerous to undertake and so few people really make big money on these moves that are rather easy technically and rewarding with big price moves in very short periods of time. Only a study of these patterns will allow you to have the confidence to trade these culmination moves. The downward sloping crash arc is nearly identical and likewise prevents people from shorting because of a big fear of a quick reversal to the upside. As long as the arc holds you can assume it will go to its maximum vertical exhaustion phase before reversing. The real key in these moves is to observe abnormally small “creeps” *for many continuous bars in a row*. This is almost always the sign of a very powerful move that will not be exhausted until the “big bars” materialize.

In the final analysis, learn that all of trading is an emotional experience. Good traders have disciplines that prevent them from getting caught up in the greed or fear of the trade. If you sense the market is “too dangerous” to do something, know it’s not. It is only your greed for money that prevents you from analyzing the situation. The trend is your friend and if you trade with the trend the market is never dangerous. What is dangerous is not to realize you are caught up in emotionalism and you are making financial decisions that will affect your life.



The above chart while only a five minute chart is, however, typical of nervous markets where a major change in trend may be taking place. On the above chart a major downtrend has just started and undoubtedly the entire pit is aggressively short and nervous. A big rally is likely, but just as likely is a bigger break after that rally comes and relieves the psychological pressure. Remember we need higher bottoms to turn this trend up and a solitary big spike rally will not do that. During nervous markets like this, it pays to find the average measured moves and also the extremes. Quite a few trades can be made before this nervousness dissipates, or the trend definitively changes.

Common Patterns



The most common problem for the trader is determining if the existing trend is changing. After a long decline or advance, one naturally gets nervous about a position reversing and what kind of trading strategy to employ. Common situations are a straight line plunge decline and trying to figure out what kind of bottoming pattern will emerge to turn the trend back up. Bottoms can be "V" bottom spikes; rounding into a bowl; or double, triple, or multiple testing plunges to the same area before the real advance gets underway.

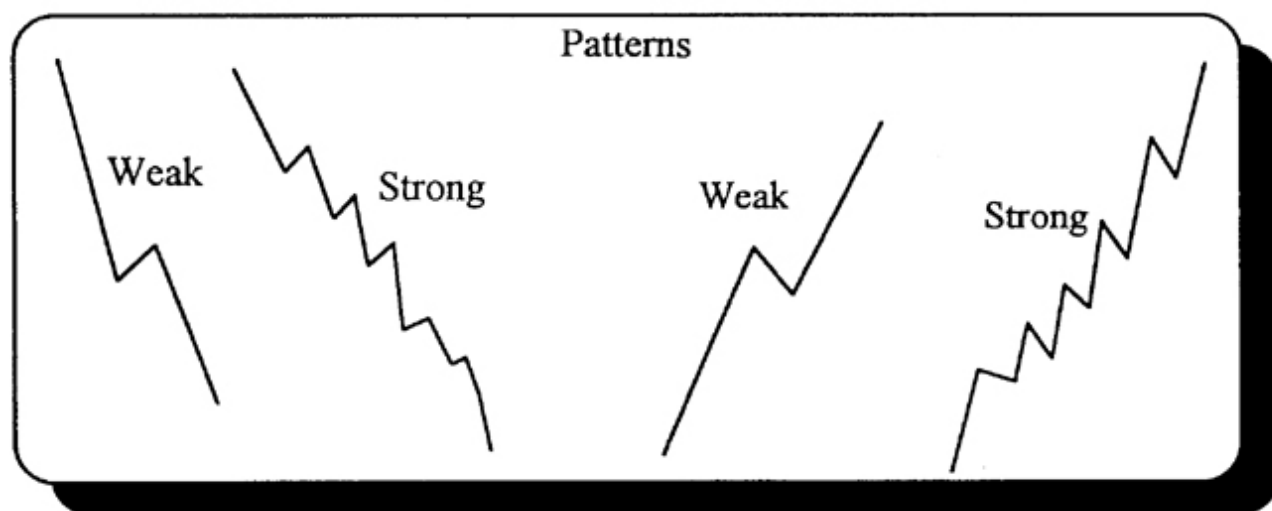
The item to note about patterns developing is where the first "wiggle" occurs. By this I mean a visible counter trend movement that then subsequently fails and the existing main trend continues. Usually there will be three or five such waves before a low is reached, although I have often seen 7, 9, and even 13-15 in strong trends before a big reversal is made. What is not usually known is that these waves are *extremely precise* as to where they occur. They are not random at all but are a mathematical harmonic of the total distance the final movement will extend to. Sometimes they occur at the exact midpoint or the one third mark, but often are at Fibonacci ratios of .236, .382, or .618 of the total distance. With our technique of "measured moves" we can usually estimate early into the new trend exactly how far it will travel based on past measured moves that have a similarly placed "wiggle". Larger waves are usually proportionate so the same symmetry on a smaller past observation can be applied to the existing larger movement deriving the appropriate ratio expansion factor from the first counter trend mark.

The most basic principle I wish to convey to you is that the more "wiggles" a trend has, the *stronger* it will be and the more difficult to reverse. In a Bull Market these nervous uptrends with lots of wiggles are frequently referred to as "climbing a wall of worry." The "worry" part is the numerous minor counter trend movements the shake traders out of their positions. These patterns are *extremely reliable*, so much so that I make a habit of searching for trends with frequent whipsaws to trade in. Once the main trend is determined, you merely buy every dip, or short every rally, and this will be successful for a great many trades in a row. Traders have a practical rule to *do the same thing until it loses money* and this is based on this principle of the reliability of "wiggles".

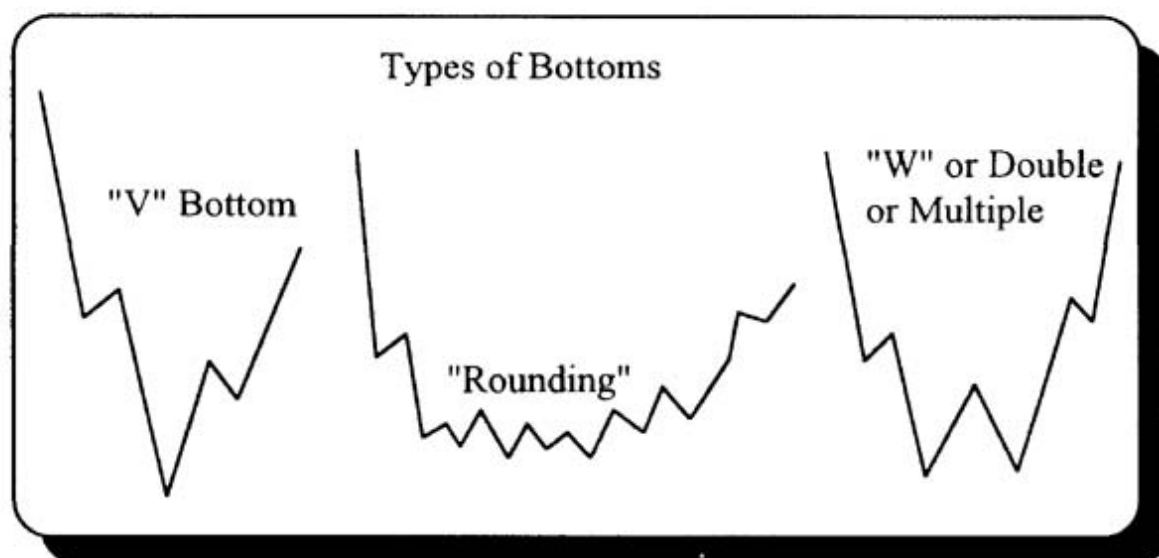
Recently the stock market broke and plunged about 100 Dow Points in two days. Many people were frightened and called me for advice. On my hourly chart I noticed a "straight line" decline that dropped almost 8 to 10 points *every* hour for the two days or about 50 points each day. There

was only *one two hour counter rally* of about 10 points in the entire move and that occurred at about the midpoint of 50 points down. Seeing that *pattern*, I knew that the trend was *not* very powerful because it was a panicky plunge without *counter trend self correcting rallies*. Without the counter trend rallies for the shorts to cover and the bargain hunters to buy, the odds favored a climax "v" bottom low with a primary uptrend as soon as a technical buy signal was generated. Sure enough the first few hourly rallies off the low produced numerous nervous wiggles that resulted in higher bottoms. As soon as I saw five complete wiggles that were higher bottoms, I knew with absolute certainty that the trend was up and a complete retracement to new all time highs was just ahead. This information was given on the hourly chart long before even a 38.2% retracement was evident and most traders simply shorted into the rising trend and lost money as the market went higher and higher.

The principle here of the rising bottoms pattern with frequent small counter trend plunges is a very powerful tool. The vast majority of traders know so little about the power of chart interpretation that they must wait for at least a 50% retracement before they think the trend can change to up again. This is simply not true. You need only 5 higher bottoms to be certain and these can occur within 10 % of the low price. The *pattern you must fear* when buying into a rally off a low is a *big rally that is a straight line affair without counter trend interruptions*. That is a sign of the Bear Market trend short squeeze rally, and it can only be shorted. In those rallies the shorts are forced out and the movement is extreme but usually collapses as soon as the shorts are out.



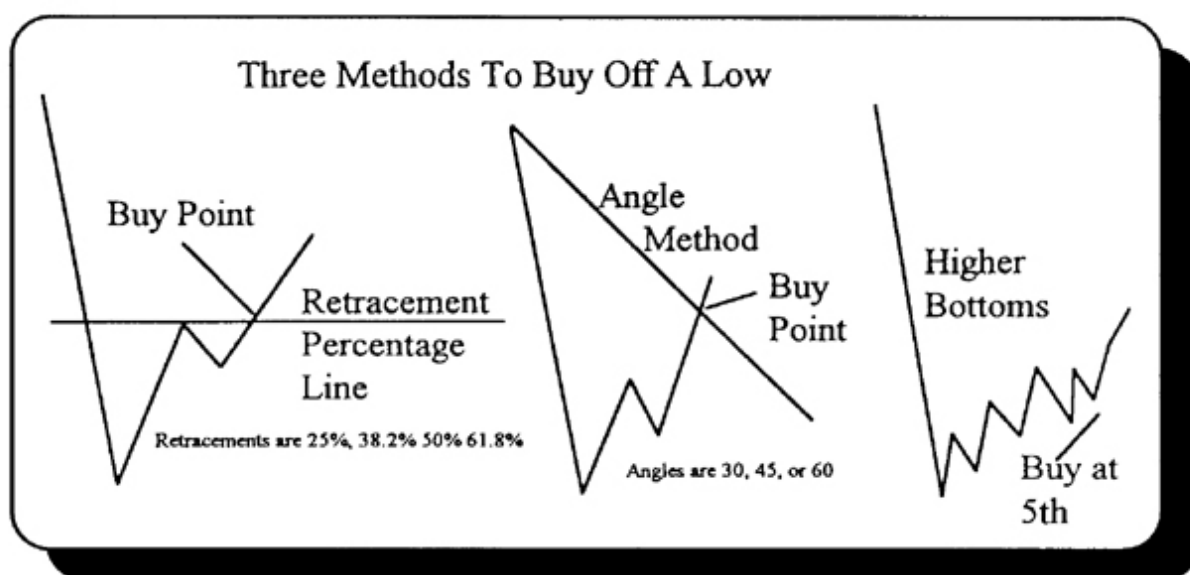
Remember that the strong numerous "wiggle" patterns assume that each wiggle is higher or lower than the last to confirm its strength. Numerous wiggles that occur at the same level do not necessarily tell us much. What we are looking for is minute bullish or bearish patterns of higher bottoms to be bullish, or lower tops and lower bottoms for a declining pattern. Even though these may occur on a very minute basis such as on an intra-day tick chart or a five minute chart, the patterns are reliable for much longer term trends.



In looking at the above types of bottoms, the main question is: At what point do we know it is a bottom and not a minor upward wiggle? The usual solutions are three. The first is the use of retracement percentages. Down trends can rally back one quarter to one third of the drop and in extremes, one half or even .618. This type of analysis is most common and does not give us a position until well off the bottom. For that reason I try not to rely on retracements.

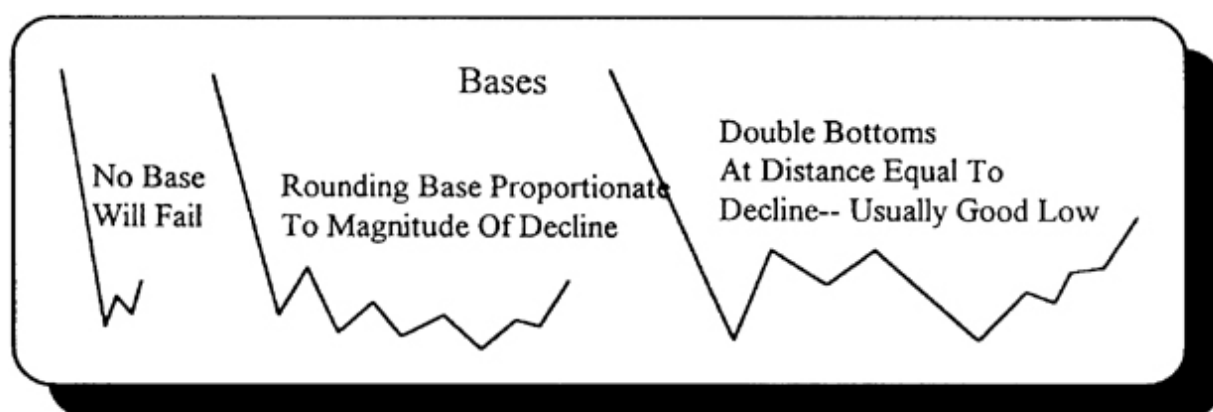
The second method is momentum, and the most common application is the use of angles. The basic principle is that a declining trend rarely regains the 45 degree angle coming down from the top until the trend has changed. This method may also only work when a rally is a great distance off of the bottom and not give us a "cheap" entry point, but sometimes a long sideways bottom flat breaks through the 45 degree angle just by going sideways and does give us an entry right at the low. These angle techniques are based on the assumption of momentum exhaustion and one buys when the angle is broken with a stop loss at the low. The three most commonly used angles are 30 degrees, 45 degrees, and 60 degrees. But you will also note the geometric angles of 1 x 1, 1 x 2, 1 x 4, 1 x 8, etc... work nicely. Angles are especially suited for covering shorts rather than going long, but if you do go long on the assumption the trend has changed, you then use a rising angle from the low point to confirm the assumed uptrend, and that rising angle is your stop out point.

The best technique of course to determine reversal of trend is to spot a *signal reversal bar* and then watch for a series of higher bottoms to identify the bull pattern. This is the single most reliable method of determining the trend.



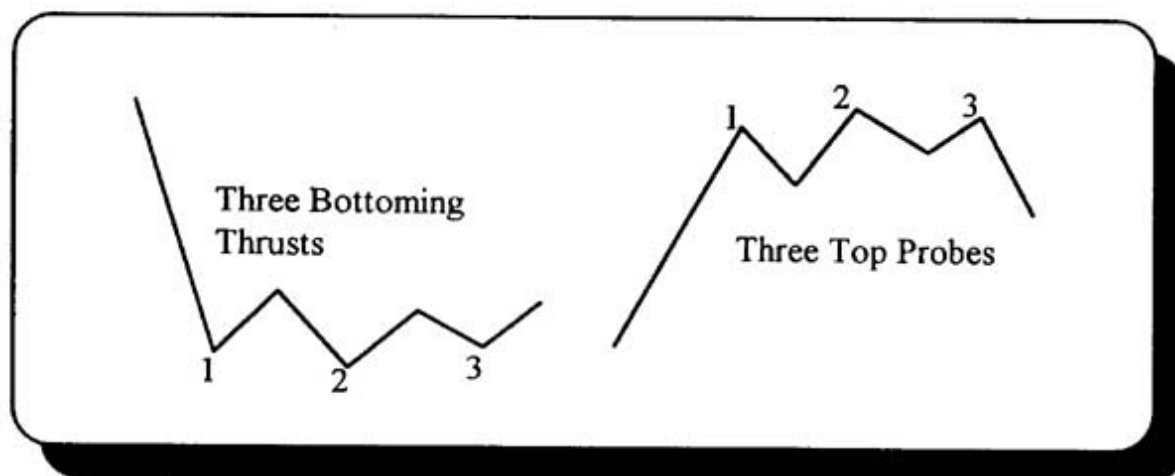
The above methods apply equally well to selling at tops. Just turn the charts upside down and apply the same principles.

In trying to determine whether a low has been made keep in mind the overall symmetry of the chart pattern. If a long term decline has been in effect for say nine months, and the decline was nicely defined with parallel channels, do not think an uptrend reversal will come easily. Usually to break out of a parallel channel decline you will need an advance to at least twice the width of the channel and the advance will normally take on a right angle (90 degree) slope upwards from the plane of the decline. The *time element* is usually similar in retracement percentages as are the prices. In other words a decline that has been going on for ten months may have to base for one quarter (2.5 months), to one third (3 months) before a major up move begins again. Explosive upside reversals come rarely, only at the beginnings of new bull market trends. Most other advances require an appropriate base building period and a rounding bottom.

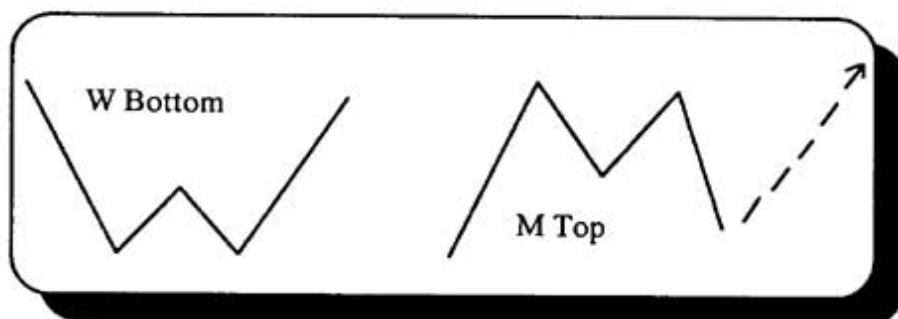


Three Drives To A Low (or High)

Many bottoms and tops are only complete after three attempts are made to break to a new extreme price. These patterns are often called "head and shoulders" or "triple bottoms or triple tops." Basically the first attempt to turn a powerful trend is only partially successful and nervous traders are quick to abandon the trade and prices settle back to where they were before the attempt. Keep in mind our principle of counting higher bottoms that states that three often fail and sometimes four, but if you see five higher lows you can rely on the new trend. Triple movements work at least half of the time, however, so three drives to a low or high should be watched closely.

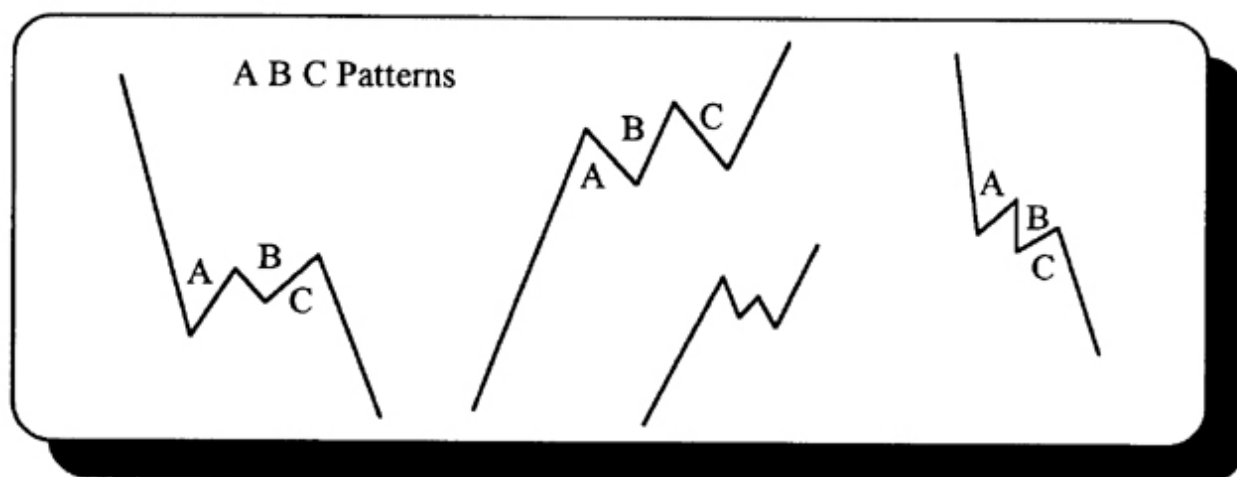


Another frequently seen pattern is the "W" bottom and the "M" top. In the case of the W bottom, it usually represents a good low for an advance, but the M top is almost never a top! In S&P futures trading an M top usually gives a scary decline to a slightly higher bottom at the point of the right M leg, slightly higher than the left M leg. An advance to new highs above the top of the M is then the usual result. This is worth remembering since this pattern is easy to spot and is very emotional but reliable.



A, B, C Corrections

At the end of many primary trends we find counter trend movements called "A B C" corrections. This is really *just a three count alternating wave* that is very symmetrical. Usually the A and the C legs go in the same direction and are approximately the same size. After this pattern completes, the primary trend resumes. This is another reason to favor the five higher bottoms count before going long, so you don't buy into an ABC just before the next big decline. These counts take the usual form as follows:

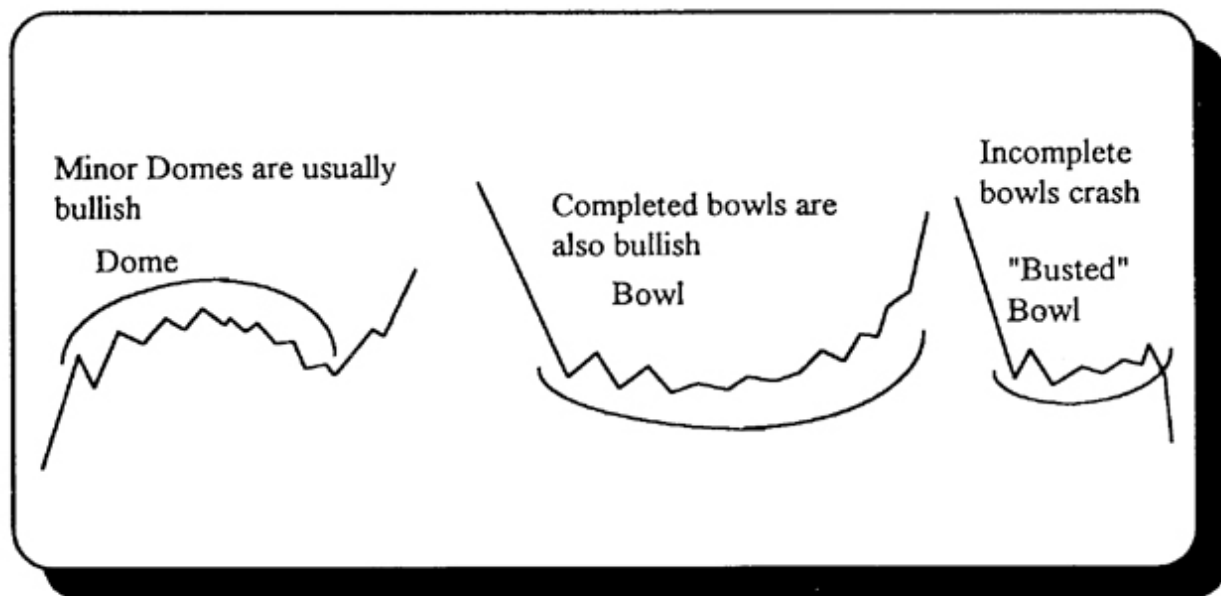


These patterns are very symmetrical and represent simple counter trend rally attempts that are a dead give away that the main trend is quite strong and is not going to reverse any time soon. Note that the A and C legs are usually the same length, and sometimes the B leg also. The retracement levels obtained on these legs are usually very small and this too is a sign that the counter trend has little strength. When you see this three wave pattern with little price movement counter to the main trend you should be prepared to go with the main trend as soon as a new breakout extreme is hit. These patterns often show up at the midpoint of the bigger leg so a trade at the end of the C leg is usually quite profitable.

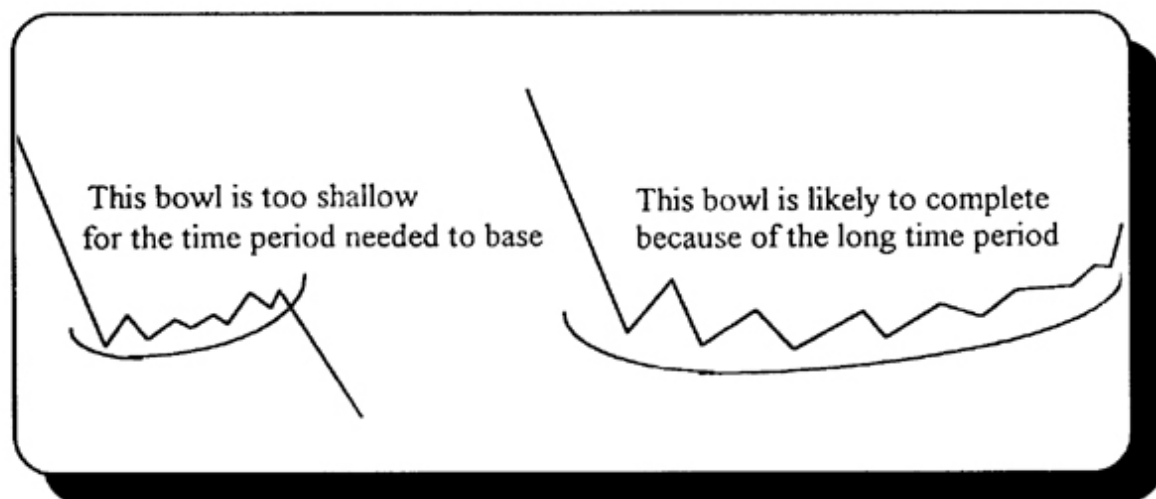
Bowls and Arcs

We have talked about circular arcs previously but we have not discussed the general principles of their resolutions. Basically, a gradual roll over "dome" arc forming an apparent high is actually bullish, and when the dome is broken out of, a big leg up usually ensues. A bowl formation on the other hand that appears to form a bottom, is quite dangerous if broken down from. A downside breakout from a bowl leads to a crash collapse. Especially vulnerable are bowls that are only half to three quarters formed. These bowls would look like a figurative clock from eight o'clock to five or four o'clock when the breakdown occurs. The only bowls that are bullish are the ones that make it past four o'clock headed for three. These are more usually referred to as "cup with a

handle" patterns, whereby after the cup pattern is formed from nine o'clock to three o'clock, a big "spike" handle is seen to the upside before the first correction. These patterns look as follows:



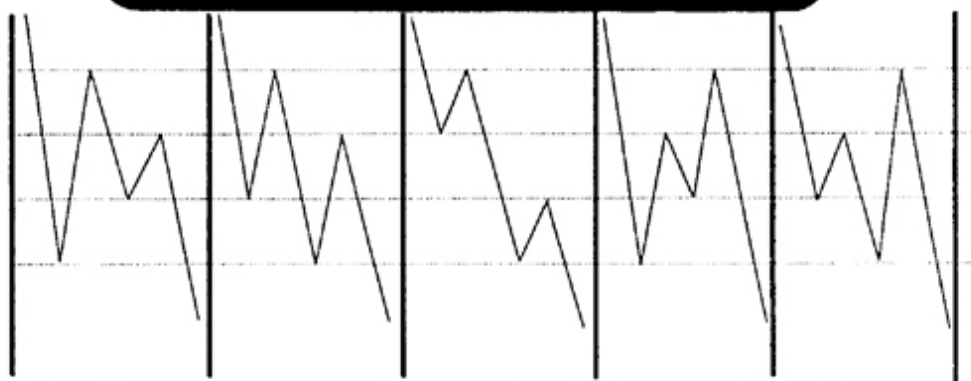
Usually you can see the symmetry of the pattern unfolding and know if the bowl will collapse or complete. For example, during a major decline of several months a minor bowl may form, but if the time period for the completion of the bowl is small, then that might be inappropriate for a major bottom and will only serve as temporary support until the shorts cover and when the bowl breaks the next leg down will start.



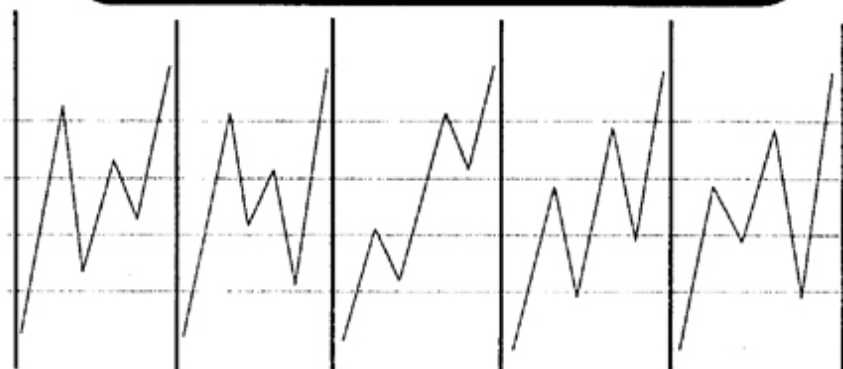
The Five Basic Bull and Bear Patterns

Although many technicians have studied charts over the years and have their own favorite patterns, I have come to the conclusion that these standard patterns are the most basic and repeat over and over. These top and bottom patterns are really the inverse mirror images of each other and with subtle variations seem to cover a myriad of possibilities but nevertheless if you memorize these you will have a big head start.

All Possible Downtrends



All Possible Uptrends



Note these lower patterns are just the inverse of the patterns above them. These are *complete patterns* and then you would expect a *new* trend to emerge. These may be seen on short term charts as well as very long term ones but the basic completion wave structure is almost always the same.

You could make a study of just these patterns for the rest of your life and that alone would be a rewarding exercise! I suggest you spend some time with these before going on.

Long Term Charts



The difference between long term and short term charts is the importance of cyclical influences on the long term chart. Short term charts are filled with numerous emotional reversals that although likewise due to cycles are much more random and subject to “slippage” and “whipsaw” news items. Longer term patterns stretching over many years show accurate trends and those trends are not easily changed. This should make chart interpretation easier, but so many people get caught up in the short term minor reversals they easily lose sight of the bigger picture unless they have a firm grounding in long term cycles.

The basic accumulation or distribution patterns usually take the form of three years up and one year down, or five years up and one and a half to two years down. Major highs and lows usually come out near anniversaries of prior highs and lows at cycle lengths of five years, seven years, ten years, twelve years, fifteen years, eighteen, nineteen and twenty years, thirty years, fifty years, sixty years, ninety years, and one hundred years. These are complete long cycles and each individual stock will tend to follow one or a few of these different lengths but not all. I only mention all (or at least the more important) long term cycles so you can quickly check the historical record and spot those cycle lengths to see if obvious “measured moves” are at work nearing those anniversaries.

Chart books with long term charts are not really that hard to find and many have typical chart time periods of twenty to thirty-five years for many issues. Longer term histories can be looked up in libraries or on computer data bases. Often a good place to start is with a chart of the market averages and you would spot the major highs and lows in history that seem to be currently repeating and then go back to newspapers near those anniversary dates and just look for the most active issues that are being written about in the popular press. These issues are the ones that have common cycle lengths as the overall market for the current market repetition.

Basic analysis would begin with the observation of a possible five or ten year anniversary coming to an end near a measured price move and a possible long term trendline penetration. Strategy is to then assume that the new reversal trend will last for a few years and then go to the shorter length charts such as the past few months of dailies and watch the swing lows and highs. Remember our basic principle is that declines cannot last more than ninety days in a long term Bull trend, nor can rallies last past ninety days in a genuine Bear trend. Once we have a ninety day penetration we can assume that the new long term trend will go in that direction for at least a year and we can start to project some average measured moves or circular arcs from the past few years. Keep in mind that near the end of a long term cycle we will find a *signal reversal bar* sell or buy signal on a *monthly*

chart. If you do not have monthly charts you can easily visualize such a final high or low bar by noting the extreme price high or low during the last *four weeks* of the existing trend, and when that four week extreme is broken, that would be the monthly reversal signal. This principle is a good one to keep in mind all the time as we note large price impulses on our shorter term charts such as hourly or dailies. If these big price changes exceed the extremes of the past five days for example on a daily chart, it is a good probability the move is the result of a breakout on a weekly chart and you might want to refer to a larger scale chart.

The other principle to keep in mind at these times is the support and resistance levels generated from the monthly signal reversal bar at the turning point extreme. On a monthly bar chart the range from the high to low on that very last bar can often be ten or more dollars, but we know that once the breakout occurs the secondary test will only pull back to the high or low of that extreme bar depending on whether a buy or sell signal was given. Knowing and recording where that price level was at the breakout will come in handy many weeks later on the subsequent test when most traders are afraid of prices going all the way back to the extreme low or high price. This is a very important point to consider when looking at long term charts and you should review the **Trend Section** again if these reversal signals are still unclear.

Knowing that long term cycles tend to come out near cycle lengths of 5, 10, 15, etc... years, we also can expect to find reversal points in our cycles near subdivisions of these primary cycle lengths. In other words if a ten year cycle is present, expect to see turns at 2.5 years, 5 years, and 7.5 years in addition to 10. Near the turns we watch our dailies for our natural common cycle lengths of 3.25 and 6.5 week cycles. Once we find these turns we can drop down to any smaller scale to trade within the now clearly defined five or ten year pattern. This type of analysis is best used for long term investors and fund managers who are looking to double large amounts of money over a few years. Traders of course will mostly stick to hourly charts and occasionally dailies, but it is still nice to have a firm grasp on the longer term outlook first to give us a little more conviction in a whippy market.

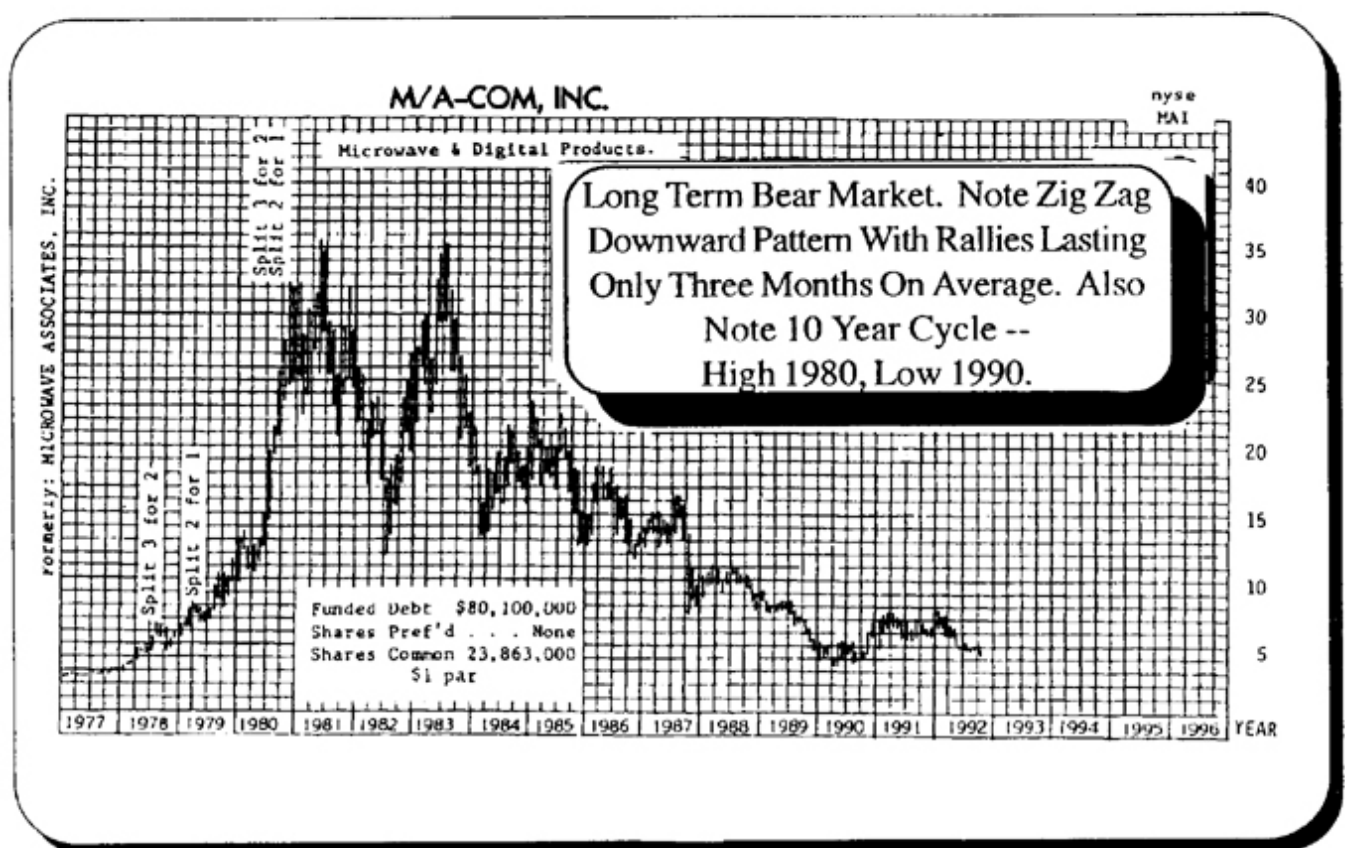
Another good technique for looking at long term patterns is to follow our numerological 360 cycle numbers. Common cycles are often found at 30, 45, 60, 90, etc... weeks and months all the way out to 360 for the end of a big cycle. Especially important are 45, 90, 180, and 360 weeks and months. If you ever get lost in the patterns it usually pays to just look back these 45 and 90 harmonics of weeks and months until you see an identical pattern. This happens much more frequently and more precisely as to exact price movements, than most people could ever imagine. Try it some time and you will be both shocked and elated.

Long term analysis in particular lends itself to subjective sociological analysis of cycle influences on the masses. That is to say, at common known cycles like twenty, fifty, sixty, ninety, and one hundred years, most common social practices return often with uncanny similarity. The building of the Berlin Wall and its destruction 45 years later is an example. The hundred years between the Lincoln and Kennedy assassinations is another. Many similar events such as labor strikes,

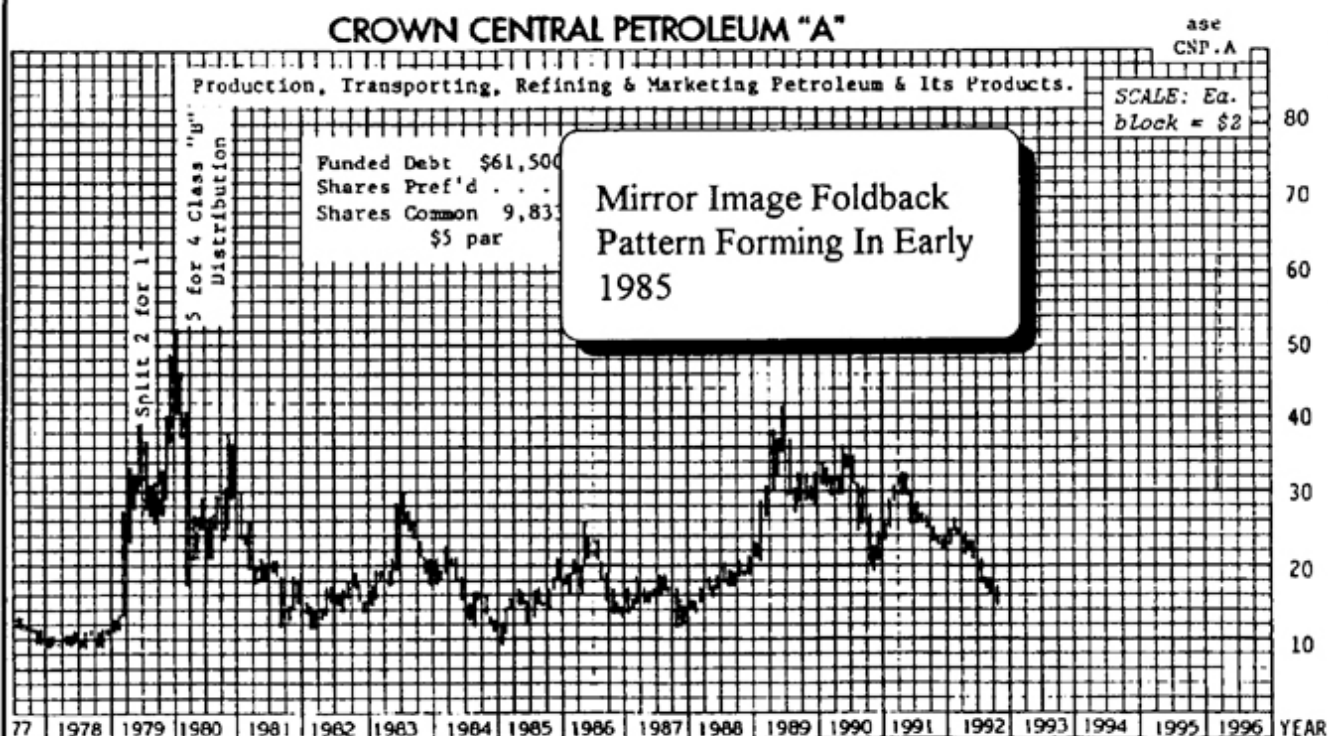
industrial bankruptcies, or wars also color the historical event and give reliability to our cycle choice as the dominant one operating at the present time. Once we see the similar sociological underpinnings, we can forecast a similar outcome. Keep in mind the principle of alternation which in cycles means that the past will repeat either exactly or exactly backwards. The cycle beginnings and endings will have the same time periods but often with exactly opposite outcomes. The actual outcome can usually be deduced, however, from an analysis of the individual elements that make up the larger theme at work in the cycle.

In keeping with the idea of alternation of cycles, one of the most powerful techniques in all chart pattern interpretation is that of **mirror image foldbacks**. This is a very important idea, and I devote a complete section of this book to it. Suffice it to say, on long term charts, patterns are often easily recognized as being exactly backwards to a prior pattern. These shapes are often symmetrical about a major high or low which becomes the foldback and each "wiggle" or wave in the up pattern is mirrored with a similar wiggle in the down pattern. When you see the obvious patterns, be sure you use them! They are highly reliable and can last for years before disappearing.

Long Term Chart Examples:

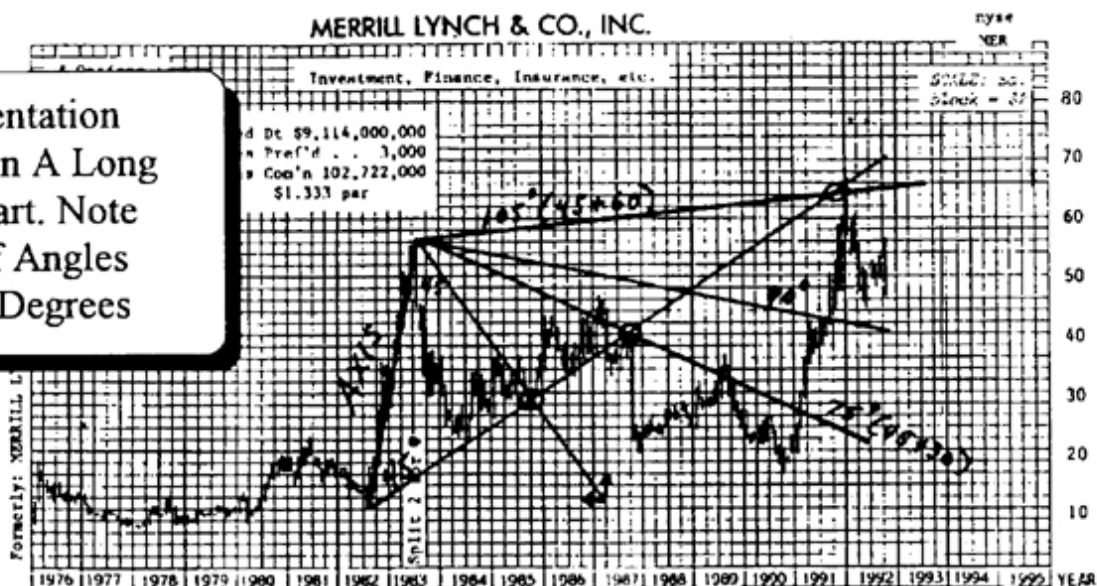


CROWN CENTRAL PETROLEUM "A"

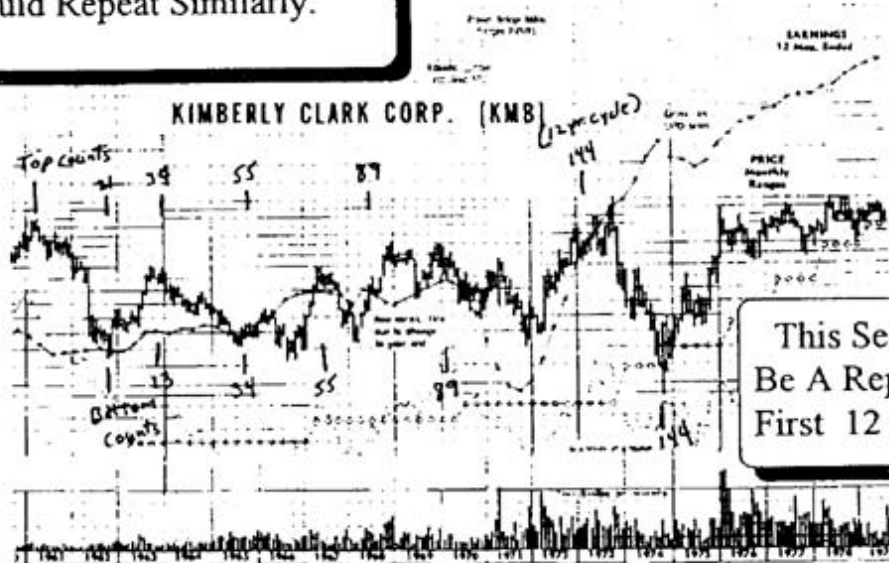


MERRILL LYNCH & CO., INC.

Axis Orientation
Angles On A Long
Term Chart. Note
Offset Of Angles
From 45 Degrees



Long Term Fibonacci Monthly Counts From A Major Top And Then The Next Low. Each 12 Year Cycle Should Repeat Similarly.

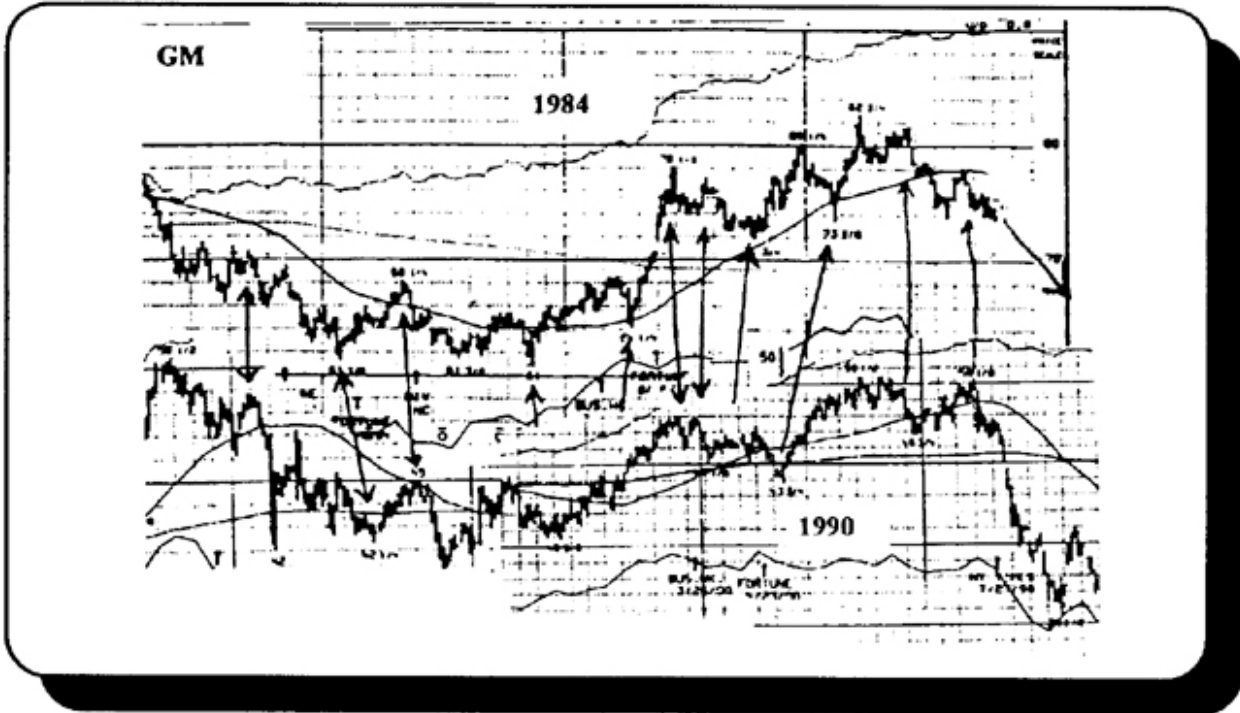


This Section Should Be A Replay Of The First 12 Years

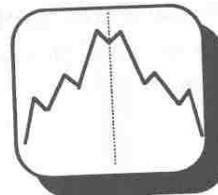
The above chart shows a long 12 year span encompassing 144 Fibonacci Months. This was one of W.D. Gann's master cycles. Often you will see the same kind of up and down bull and bear markets repeating at this time cycle length. The repetition will not be exact but the subtleties of the wave forms will be similar. It is important to note that *near*, but not exactly on, these time counts a major trendline was usually broken, and a *signal reversal monthly bar* was generated. In all technical analysis, particularly cycles, we need confirmation of a change in trend. If you study the above chart you will see multiple confirmations from angles being broken, time counts up, reversal bars, mirror images, and circular arcs or measured moves being completed. It usually pays to spend some time (several hours) on a long term chart first. Once that analysis is done right, you don't need to look too closely for many more months.

Long term chart analysis is ideally suited to cyclic pattern recognition. By this I mean that, since cycles repeat, it is usually evident visually on longer term charts that a near identical pattern is forming again. If you take the time to look you will see spectacular reproductions of prior cycles often down to the slightest subtlety. Once you make a thorough study of a stock on a long term chart and have identified its common long term cycles such as 5 years, 7 years, 10 years or other, you look closely at those time intervals to watch for wave structure and patterns repeating. Once you find a good fit you can trade with incredible success for months at a time. Often these patterns will follow exact replications for up to six months or even longer and if you are lucky enough to have noticed the pattern forming, you can become rich. The following two examples are General

pattern.

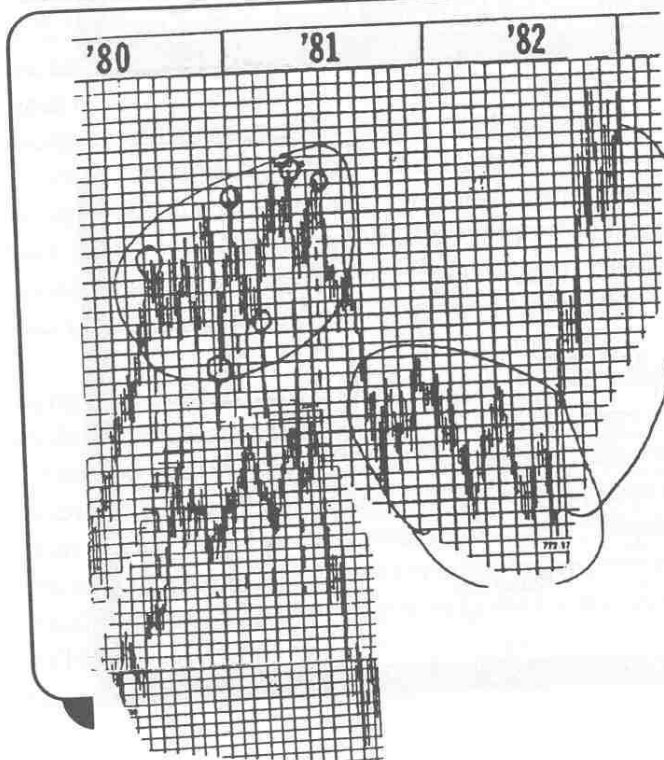


Mirror Images



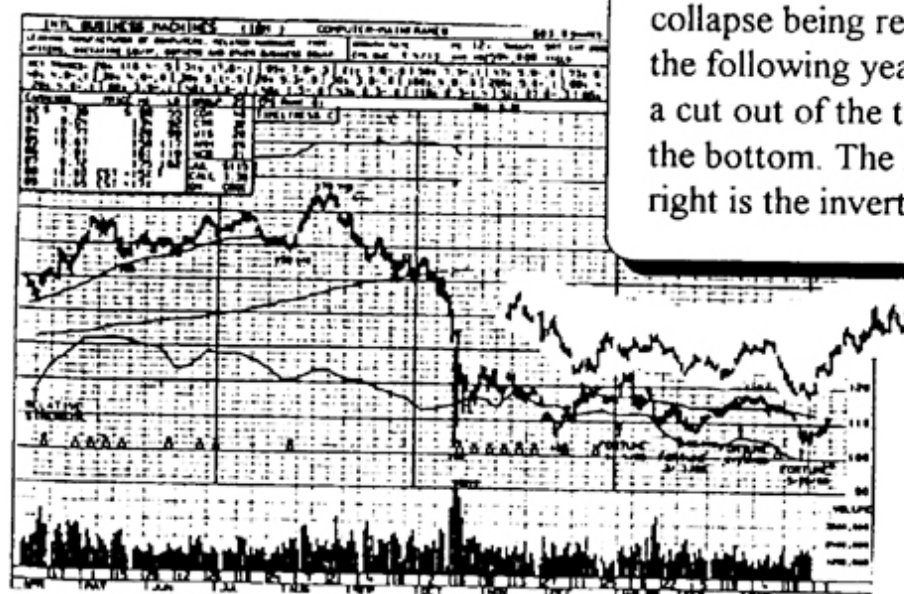
Time has always been a study for philosophers and scientists. Being a market philosopher, however, lends itself to the perfect study of the subject. As Einstein believed, time is a relative concept distorted by one's own internal frame of reference. Our biological electrical nervous system and the speed of brain impulse synapses are our only reference guideline for time in the waking state. In sleep, time disappears. In the stock market, *time goes both backwards and forwards!*

Charts clearly seem to indicate that time goes in one direction, stops, and then goes in the opposite direction causing price patterns to repeat over and over again with the exact same subtle nuances but backwards. The only difficulty in this type of analysis is that time also appears to have a *variable speed* so when going forwards and creating a price pattern, the speed may change when going backwards and the pattern repeats but appears distorted due to the change in speed on our constant time plotted axis of our chart.



Here we take the '82 low and "flip" it vertical so the low is now at the top. We then move the pattern down underneath the 1980 to 1981 top and we see the identical wave structure in both the high and its reversed reflection in the bottom! These foldbacks work for near term cycles -- not 10 year highs to low comparisons.

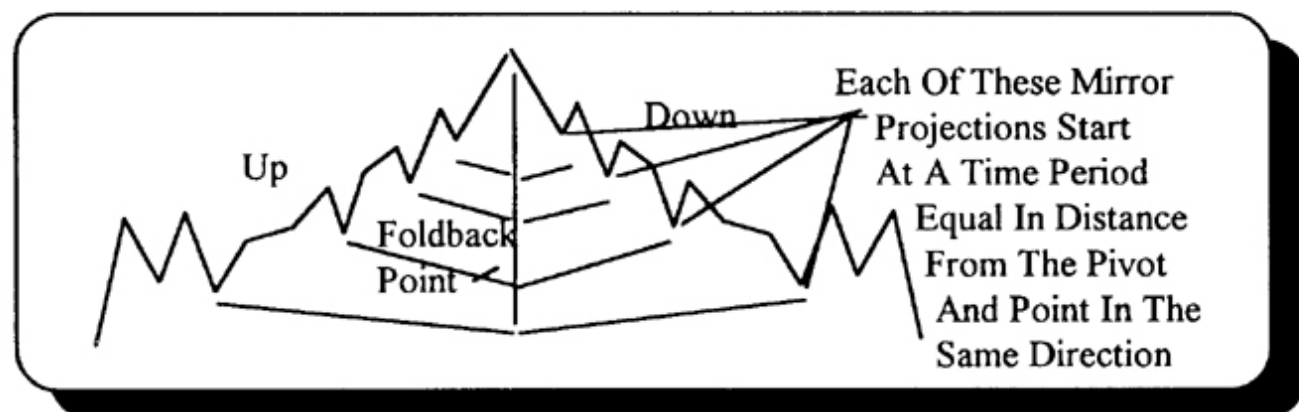
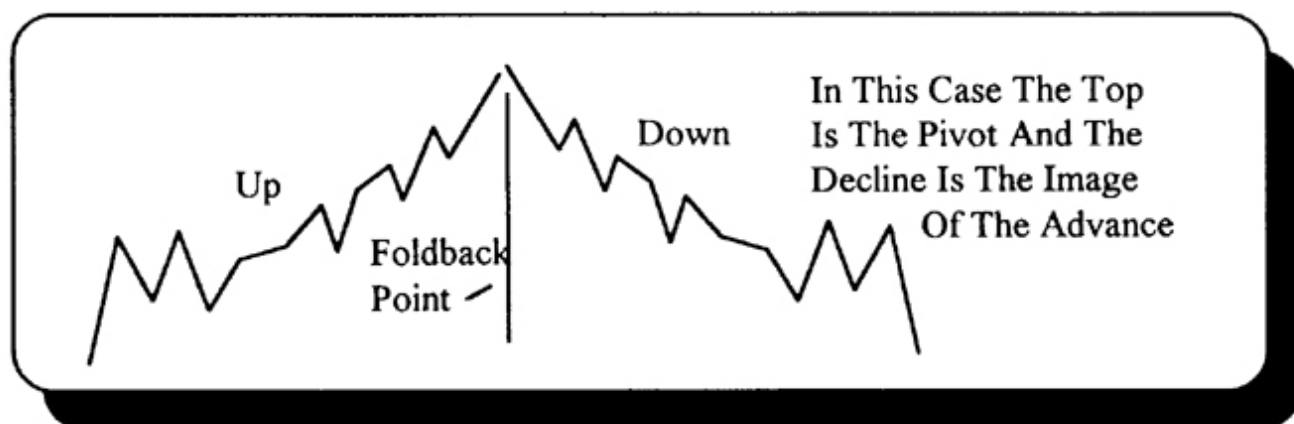
It has often been noted that the pattern going up to the top repeats as a *mirror image* on the downside after the top is in, and the top itself (or bottom) becomes the *reflection point* for the entire detailed chart pattern. The proof of this can easily be seen on the above chart pattern which recreates the 1982 bottom from the 1981 top. The fact that this pattern is almost exactly backwards clearly shows that the emotional greed at the top is the mirror reflection of the emotional fear at the bottom. This chart is created by taking the bottoming pattern in 1982 and flipping it upside down and backwards and then comparing it with the prior top in 1981. When the two are lined up under each other we see that all the "waves" match up showing that the emotional greed at the top is reflected in the emotional fear at the bottom.



IBM Chart showing 1987 top and collapse being recreated in the low the following year. This chart shows a cut out of the top graph overlaid the bottom. The low on the bottom right is the inverted top!

You may at first have a difficult time understanding this idea especially if you are not familiar with charts. I can assure you, however, that I have spent most of my adult life studying this concept and it amounts to roughly 60% of my entire chart analysis time. It is the only way to draw long term accurate chart drawings often years ahead of time that come remarkably close to actual future price fluctuations. Basic analysis begins by finding an obvious reflection point that looks symmetrical. Since patterns tend to persist for long periods of time we can trace an obvious pattern backwards and forwards for many years and still get reliable results. The first step is to start with a major high or low and count the days to the *first significant change in direction in a backwards fashion*. In other words, from a low count back to the previous high, back beyond that to a prior low, then back beyond that to a prior top, etc. We now go forward in time and note the same number of days from today where each of the past changes took place and we can make a "stick figure" drawing of the up and down swings from the past and extend them into the future. If we find

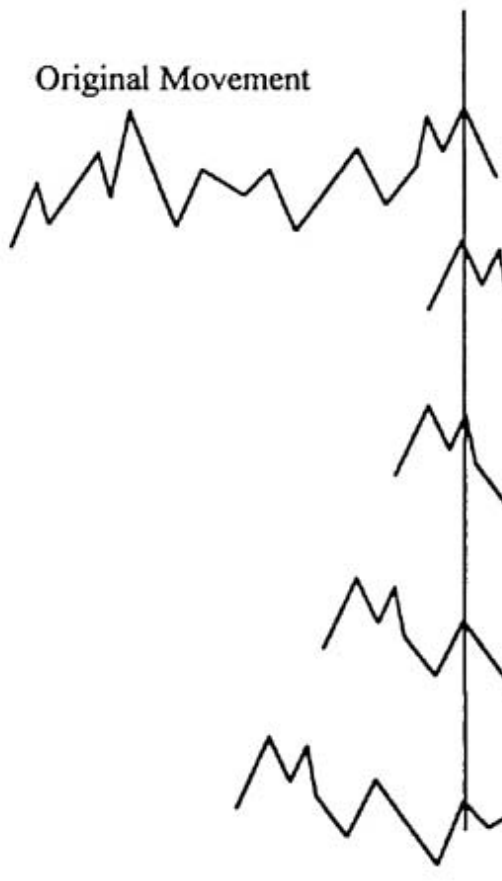
that a prior high becomes a future low we then expect the next prior low to likewise invert and now be a high. We do this exact same procedure from each major high and low over the course of the year and continue these counts backwards and forwards into the future for years and years. On my work papers I have often traced back fifteen to twenty years of history and retraced these



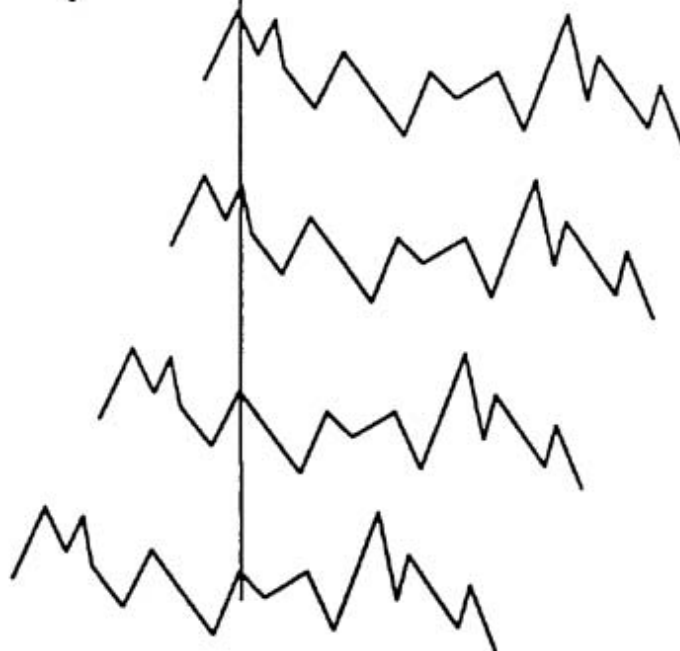
same fluctuations forward in time another fifteen to twenty years and have often found many exact correspondences. This works of course because of the existence of cycles that return again and again in a circle at recurring intervals. If we trace backwards enough, eventually we will hit the length of the cycle and the fluctuations will repeat again. Finding the major beginning and ending points is the more difficult aspect but obvious symmetries are usually quite visible to most people.

The best analysis usually consists of making a large workpaper and start on January 1st each year. You count backwards in calendar days to each major high and low over the past decade or more, and then project that count forward in time but opposite in direction to the prior movement. This can be done on ten or more lines down the paper so you have a series of forward moving "stick figure" graphs, each of which is continued into the future as far as you want to go. The real analysis comes in when deciding the direction of the swing moves for the coming year. You will have a number of differing conclusions based on each individual stick figure graph, but in most cases a number will "cluster" around a common time period pivot. You then watch the current market as it enters that pivot area and follow the stick figure that most closely resembles the graph of the current move. For example:

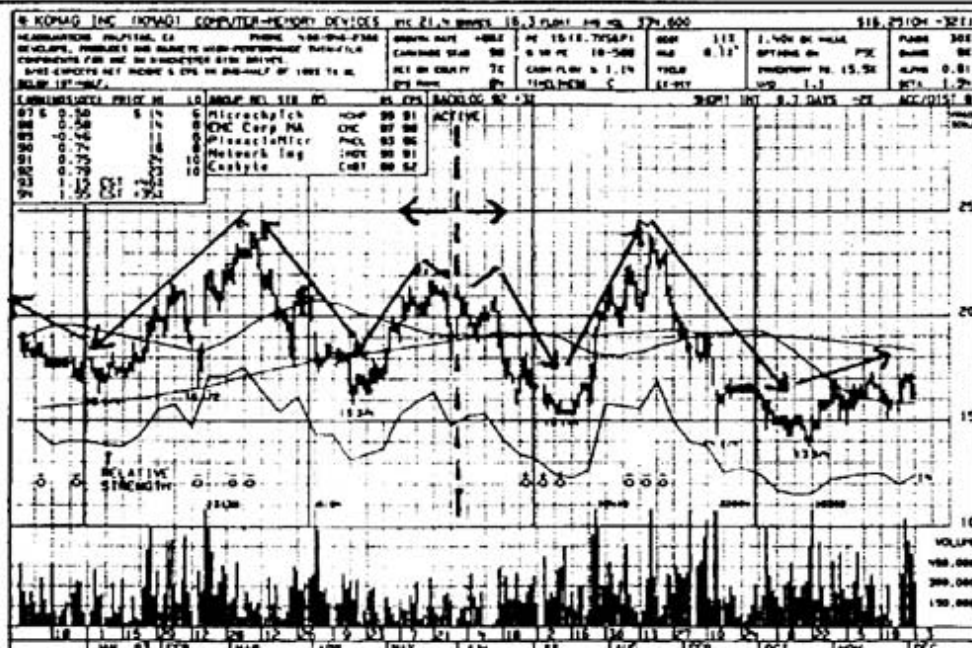
Original Movement

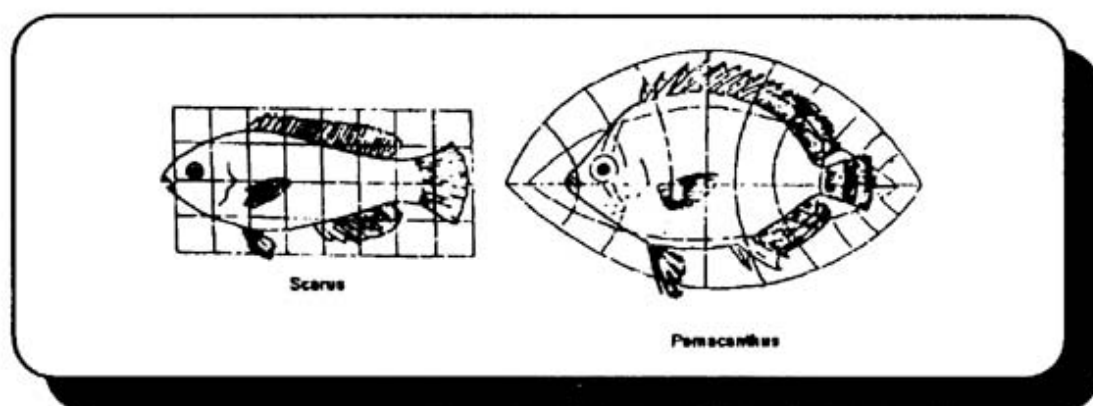


Inverted Mirror Projections Using Each Consecutive High Prior To The Pivot Point And Folding Back Into The Future



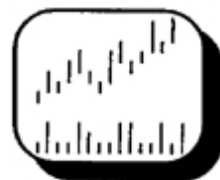
This Is Not A Good Example Since Its Not A Real Price History, But If It Were You Would See Common Clusterings Of High And Lows Into The Future And Those Pivots Would Be Your Cycle Turns





The above drawing shows two different species of fish. It is clearly implied in the drawing that somewhere in the genetic ancestry of these two, a warping of the genes took place as the second fish appears to be a distorted image of the first created by twisting the major axis lines of the drawing. This picture is what I believe we are actually looking at when we see chart patterns. The mirror image symmetry we often see is just a minor warping of the axis lines of the plotting of price and time while the more frequent complex structures are nothing but more exotic twisting of the time axis with different speeds. I am certain that some time in the future three dimensional computer drawings will be able to interpret all our common stock price patterns, making the first users of such technology quite rich!

Volume

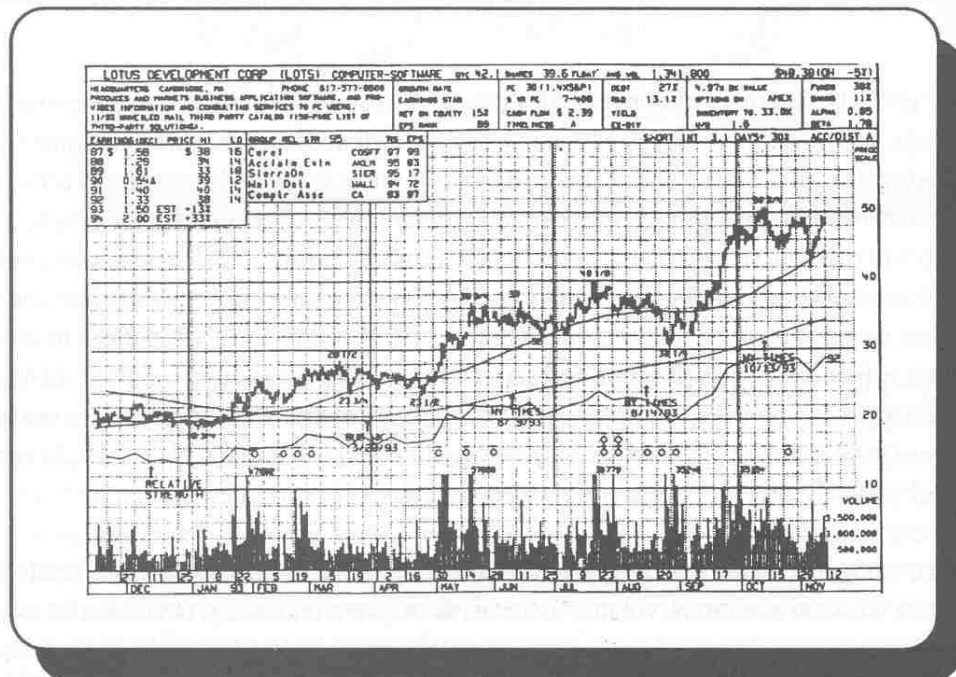


It has been rightfully said that volume precedes price. Most significant moves in the markets are caused by large supply demand imbalances and it is volume that makes the difference and moves prices in the direction of the large orders. In most cases, volume is said to be positively correlated. That means that volume goes up with the real trend of the price action. Or, if prices are in a Bull Trend, prices will rise with rising volume and a light volume decline is bullish, and a heavy volume advances the normal condition. For the Bear Trend, volume increases as prices decline and light volume rallies are seen on the counter trends. One merely observes the chart pattern to note the large volume spikes *over several months* to see if the overall pattern is rising with increasing volume (Bullish) or falling with heavy volume (Bearish). More than that, volume does not tell us much. Many of the biggest price movements in history have frequently taken place on light volume with large volume only appearing near critical turns and time cycle endings.

The most frequently held belief seems to be that volume is Bullish. This is almost completely false. It is true that, in takeover situations, volume indicates the move is underway, but in almost all other situations, volume is indicative of a top! Only in situations where the market has been declining for some time and volume dries up to its lowest level in weeks and then the prices rise on increasing volume, is the situation bullish. The typical case where heavy volume is seen is very near the top of a move where buyers and sellers meet in a tug of war and when the volume declines prices usually do too. Normally this is only a small correction that will last three days to three weeks, but nevertheless it will be a top. Big price movements usually take place without too many people noticing. The typical stock will creep up a quarter of a point per day for several days until heavy volume comes in as everyone jumps aboard the move and on that final day the stock goes up a dollar or so and then tops out. Most people need instant gratification and frequently buy or sell at these heavy volume extremes and get trapped on the wrong side of the market. The better trades are to buy the light volume declining days and to sell on the heavier volume rallies.

Keep in mind when looking for volume signs that bull and bear market movements are parts of the psychological process known as *accumulation* or *distribution*. The accumulation cycle is the Bull Market and the distribution is the Bear Market. These accumulation/distribution periods often last for months to years because it takes innumerable institutions that long to acquire their shares or to completely sell out after a bull move is over. When looking at the chart you would want to look

for the tell tale volume spikes to see whether accumulation or distribution is underway. When these spikes are present there is a good trending market to actively trade. Much later in the cycle, the volume spikes disappear, the stock goes flat for many weeks to months, and these periods are not conducive to good trading opportunities.



The above chart of Lotus shows the basic volume accumulation pattern of big spikes correlating with breakout advances and then sideways corrections on lessening volume. Note the classic "stair step" pattern of higher prices over months with continued heavy volume near each advance. When volume reaches its lowest level the price advance again resumes. As long as these spikes continue the basic accumulation process is at work and you do not have to worry about a major break in the long term trend. Only after a long period of little volume activity, and then declining prices on heavier volume, would one become concerned. Keep in mind that institutions who buy stocks showing these positive volume correlations have no intention of day trading but are looking out six months to a year or more and price levels at least 50% higher, or the trade wouldn't make sense to them. Unless the fundamentals change dramatically, you can assume that you have *at least six months of clear sailing to buy dips* on these patterns before the long term trend will change. If you do see a pattern with heavy volume declines you may want to go back over the history of the past year or two to see when the big volume buyers got in and at what price. This is not to say you

will not see big volume declines in a bullish pattern -- you will, but you should not see consistently heavy volume breakdowns that last more than six weeks on a daily chart. Remember our definition of a Bear Trend includes breakdowns to price levels not seen in 90 days or more, so heavy volume on lower levels more than three months from the top probably spell trouble.

Another fundamental rule of technical analysis is that "distribution always takes place after the top." What this means is that you don't have to be concerned with guessing the high price for a move. Only after a good correction of 10 to 20% will the rallies back occur on very heavy volume. To the uninitiated this looks like positive volume correlating with a rising market. If, however, the top is in and the stock is making a series of lower tops and lower lows' pattern, any volume occurring even on up days is considered distribution or liquidation by the big institutions. Institutions have very large positions in stocks and frequently a big fund might own 3 to 5 million shares or more of an individual issue. These investors are in for the long haul and can only get in and out of positions over many weeks to months. Once the break is big enough so that they believe the upside is limited, they will patiently wait for the next rally to unload. This is called *distribution* and is done after the final top is in. Bargain hunters and shorts usually buy the stock from the large institutional sellers but these new traders have short term investment horizons and the stock will be back on the market for sale within days to a few weeks.

The distribution phase is just like the bullish accumulation phase only backwards. Heavy volume breakdown spikes will be consistently seen over many months as the stock moves lower and lower. You do not want to own these types of stocks until a period of several weeks has passed since the last volume spike and the stock is now rising for at least three months without making a new low.

In regard to the market averages, increasing volume often accompanies advances and when an average of say 5 trading days or so of volume starts to decline the top is usually in and a correction is due. As long as the volume is increasing the advance may continue but look for the change in volume to note the *cyclical change* taking place. Cyclical is the key word to remember about volume since it is only on cycle turns that there is widespread participation and volume can change hands. If you are looking for cycles, look to the active issues.

The declining phase likewise is measured by increasing volume and when that dries up the decline is over. For years I kept an hourly chart of the Dow Jones Averages and noted the volume for each hour under each closing hourly price. The volume almost always gave a clear cut indication of the change coming the next hour as volume dried up to the lowest level in a few days. This light volume was obvious if noted hour by hour but often the last hour of the move would be a big price decline on light volume. The big price decline scared everyone from buying into the dip, but the volume dry up was the telling key to the big reversal to be seen by the next hour.