

## **Why Technicals ?**

The rationale behind investment in shares and stocks can simply be defined in one small sentence " to make money by capitalizing on fluctuation in prices". Therefore, we have to assume that a common investor, while investing in a script is devoid of any sentiment and is directed with one simple goal of 'Profit objective'. With objective being defined we now come to a more difficult task of determining as to how the objective can be achieved.

The achievement of profit objective presupposes prevalence of analysis in order to decipher, in advance, correctly and comprehensively, the development of price trends/movements. To put it in simple words, one must correctly gauge as to which scripts will fetch better prices in near future or which will soon counter a nose dive in terms of prices so that one can sell in advance to cover the sale at a lower price and earn margin out of the difference.

Any form of market, that includes Capital market too, comprises of market dynamics of demand supply interaction. Pivotal in the form of net worth, eps, P/E ratio etc provide the basic market platform for scripts or levels where demand and supply factors may interact. However, the fluctuation in prices of scripts, we shall observe, follow metamorphosis various other economic factors/ principles which co-ordinate to bring about the state of equilibrium arising out of aforesaid interaction.

Over the years the factors that influence development of market trends have been consolidated in the form of Technical studies and in the backdrop of modern era of technological advancement, have been interalia configured in state of the art software programs that help investors in determining possible development of trends and to profit there from.

## **What Technical Theories?:**

Theories of demand supply and price movements are chronological to the basics of Economics and have grown since the advent of human from the stage of barter trade. It is beyond our scope to write here either history or a documentary about the same. However, in nutshell, we shall try our best to give the reader an essence of some economic theories and principles, which are commonly, used by traders and Equity strategists/analysts, around the world, to detect and determine various price trends in capital and/or commodity market.

## **DOW THEORY**

Dow Theory dates back to 1897 and as the name indicates, were developed by Charles Dow. The theory comprises of six assumptions, namely:

- i) *The average discounts everything:* The price of any script/stock reflects everything known about the security. As new information surface, the market participant quickly disseminates the same and let the price adjust accordingly.
- ii) *The market is comprised of three trends:* Stock market experiences three trends viz: Primary trend, Secondary trend and Minor trend. Primary trend usually lasts more than one year and may extend for several years. Secondary trends are intermediate corrective

reactions to Primary trend and last from one to three months and retrace from one-third to two thirds of the previous Secondary trends. Minor trends depict short-term movements lasting from one day to three weeks. In other words, Secondary trends are essentially clustered of Minor trends.

- iii) *Primary trends have three phases:* The first phase of Primary trend experience aggressive buying by informed investors in anticipation of economic recovery and long-term growth. The second phase is characterized by better corporate performance and improved economic conditions influencing the investors of further accumulation of stocks. The third phase presupposes peak economic environment and buying frenzy among general public. Dow assumed that the investors during the first and second phase now start slowly liquidating their investment at this stage in anticipation of gradual decline to follow.
- iv) *The averages must confirm each other:* The averages have to extend beyond their previous secondary peak (or trough) in order for a change of trend to confirm.
- v) *The volume confirms the trend:* Volume should expand in the direction of Primary trend. In other words, should the Primary be directing down wards, the volume would increase with market decline. Similarly higher volume be experienced consequent to market rise should the Primary be bullish in direction.
- vi) *A trend remains intact until it gives a definite sign of reversal:* An up trend comprises of a series of higher high and higher lows and for it to reverse, it must experience at least one lower high and lower low.

**Fibonacci Studies:**

**Overview**

Fibonacci numbers are the result of work by Leonardo Fibonacci in the early 1200's while studying the Great Pyramid of Gizeh. The Fibonacci series is a numerical sequence comprised of adding the previous numbers together, i.e., (1,2,3,5,8,13,21,34,55,89,144,233etc.)

An interesting property of these numbers is that as the series proceeds, any given number is 1.618 times the preceding number and 0.618% of the next number.

$$(34/55 = 55/89 = 144/233 = 0.618) \quad (55/34 = 89/55 = 233/144 = 1.618),$$

and  $\qquad\qquad\qquad 1.618 \qquad\qquad\qquad = 1/0.618.$

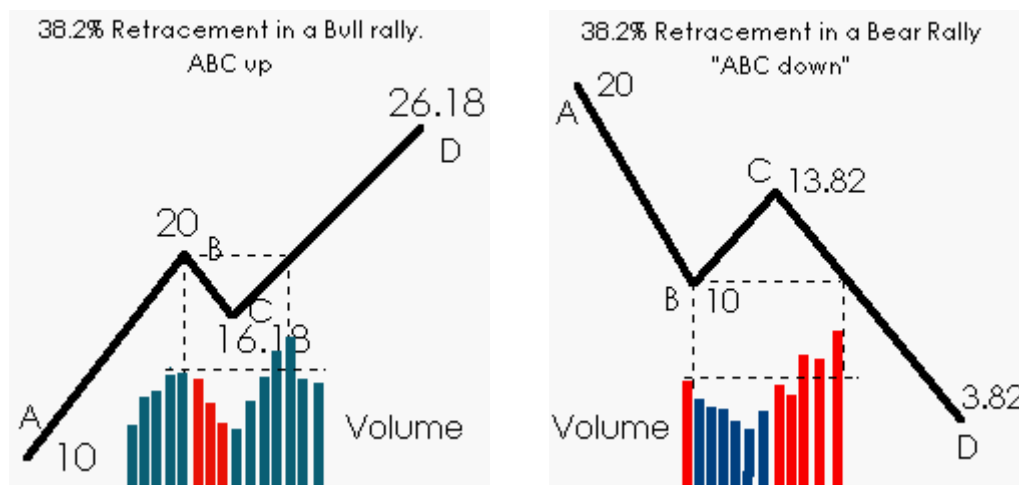
These properties of the Fibonacci series occur throughout nature, science and mathematics. The number 0.618 is often referred to as the "golden ratio" as it is the root of the following polynomial  $x^2+x-1=0$  which can be rearranged to  $x = 1/(1+x)$ . The other fibs 0.382 and 0.5 commonly used in technical analysis have a less impressive background but are just as powerful in Technical analysis.  $0.382=(1-.618)=(0.618*0.618)$

and 0.5 is the mean of the two numbers. Other neat fib facts  $(0.618*(1+0.618)=1$  and  $(0.382*(1+.618))=0.618.$

## Use of Fibonacci in Technical Analysis

Fibonacci numbers are commonly used in Technical Analysis with or without a knowledge of Elliot Wave Analysis to determine potential support, resistance, and price objectives. 38.2% retracements usually imply that the prior trend will continue, 61.8% retracements imply a new trend is establishing itself. 50% retracement implies indecision. 38.2% retracements are considered neutral retracements in a healthy trend.

Price objectives for a natural retracements (38.2%) can be determined by adding (or subtracting in a downtrend) the magnitude of the previous trend to the 38.2% retracements. After the 38.2% retracements the stock should break through the previous swing point (B) on heavier volume. If the volume isn't there the magnitude of the move will usually be diminished, especially on very low volume. 61.8% retracements are warning signs of a potential trend changes.



$$A-B = C-D \text{ when } B-C = 38.2\% \text{ of } A-B$$

Fibonacci tools that are commonly used in Technical analysis are:

- Fibonacci Circles:** The **Fibonacci Circles** tool is used to find support and resistance areas in both price and time. Fibonacci Circles ratios are commonly drawn using a recent Pivot as the center of the circle, moving out to the latest Pivot point.
- Fibonacci Extension:** The **Fibonacci Extension** tool is used to measure the amount the market has extended compared to the overall market movement. Fibonacci Extensions are commonly drawn from the beginning of Wave 1 (*the Zero point*) to the top of Wave 3 and then to the Wave 4 retracements to find a target price area for the Wave 5 extension.
- Fibonacci Retracements:** The **Fibonacci Retracements** tool is used to measure the amount the market has retraced compared to the overall market movement. Fibonacci Retracements are commonly drawn from the beginning of Wave 1 (*the Zero point*) to the top of Wave 3 to find a target price area for the Wave 4 retracements.
- Fibonacci Time:** The **Fibonacci Time** tool is used to project Fibonacci ratios out into the future. With the idea that past Pivots, one can project future Pivots or changes in trend. Time & Price Squares help to

identify changes in a trend, such as those found at the end of an Elliott Wave Three, Four or Five, or in A-B-C corrections as well as intermediate and minor price swings. Time & Price Squares are values determined by Gann (Time) & Fibonacci (Price).

### **Gann Studies**

W. D. Gann (1878-1955) designed several unique techniques for studying price charts. Central to Gann's techniques was the use of geometric angles in conjunction with time and price. Gann believed that specific geometric patterns and angles had unique characteristics that could be used to predict price action.

All of Gann's techniques require that equal time and price intervals be used on the charts, so that a rise/run of 1 x 1 will always equal a 45-degree angle.

Gann believed that the ideal balance between time and price exists when prices rise or fall at a 45-degree angle relative to the time axis. This is also called a 1 x 1 angle (i.e., prices rise one price unit for each time unit).

Gann Angles are drawn between a significant bottom and top (or vice versa) at various angles. Deemed the most important by Gann, the 1 x 1 trend line signifies a bull market if prices are above the trend line or a bear market if below. Gann felt that a 1 x 1 trend line provides major support during an up-trend and when the trend line is broken, it signifies a major reversal in the trend. Gann identified nine significant angles, with the 1 x 1 being the most important:

1 x 8	-	82.5 degrees
1 x 4	-	75 degrees
1 x 3	-	71.25 degrees
1 x 2	-	63.75 degrees
1 x 1	-	45 degrees
2 x 1	-	26.25 degrees
3 x 1	-	18.75 degrees
4 x 1	-	15 degrees
8 x 1	-	7.5 degrees

In order for the rise/run values (e.g., 1 x 1, 1 x 8, etc.) to match the actual angles (in degrees), the x- and y-axes must have equally spaced intervals. This means that one unit on the x-axis (i.e., hour, day, week, month, etc.) must be the same distance as one unit on the y-axis. The easiest way to calibrate the chart is make sure that a 1 x 1 angle produces a 45-degree angle.

Gann observed that each of the angles could provide support and resistance depending on the trend. For example, during an up-trend the 1 x 1 angle tends to provide major support. A major reversal is signaled when prices fall below the 1 x 1 angled trend line. According to Gann, prices should then be expected to fall to the next trend line (i.e., the 2 x 1 angle). In other words, as one angle is penetrated, expect prices to move and consolidate at the next angle.

Gann developed several techniques for studying market action. These include Gann Lines, Gann Fans, and Gann Grids.

### **Elliott Waves:**

The Elliott Wave theory is based on how groups of people behave. Mass psychology with swings from pessimism to optimism and back is described as the basis for the patterns the Elliott wave are supposed to identify. The Elliott Wave Principle is named after Ralph Nelson Elliott who did most of his work on wave patterns in the 1930s and 1940s. Mr. Elliott contends that social, or crowd behavior trends can be recognized in the price trend activity in the financial markets. Elliott came up with thirteen patterns or "waves," that he suggested recur in the markets. Linking those waves together he suggested helps to identify larger versions of those same patterns that occur over longer periods of time.

There are two modes of wave development: motive and corrective. Motive waves have a five-wave structure, while corrective waves have a three-wave structure or a variation thereof. Motive mode is employed by both the five-wave pattern of Figure 1-1 and its same-directional components, i.e., waves 1, 3 and 5. Their structures are called "motive" because they powerfully impel the market. Corrective mode is employed by all countertrend interruptions, which include waves 2 and 4 in Figure 1-1. Their structures are called "corrective" because they can accomplish only partial retracements, or "correction," of the progress achieved by any preceding motive wave. Thus, the two modes are fundamentally different, both in their roles and in their construction, as will be detailed throughout this course.

In his 1938 book, *The Wave Principle*, and again in a series of articles published in 1939 by *Financial World* magazine, R.N. Elliott pointed out that the stock market unfolds according to a basic rhythm or pattern of five waves up and three waves down to form a complete cycle of eight waves. The pattern of five waves up followed by three waves down is depicted in Figure 1-2.

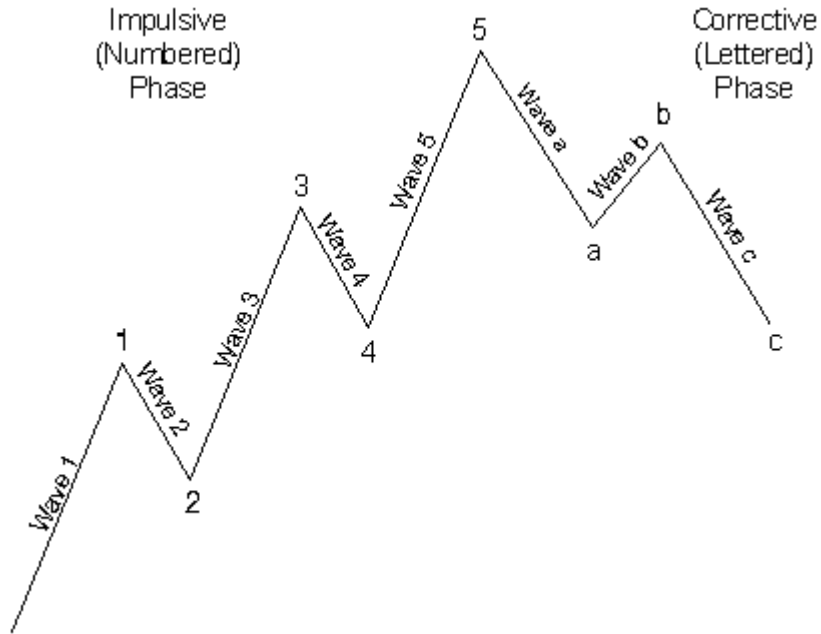


Figure 1-2

One complete cycle consisting of eight waves, then, is made up of two distinct phases, the motive phase (also called a "five"), whose sub waves are denoted by numbers, and the corrective phase (also called a "three"), whose sub waves are denoted by letters. The sequence a, b, c corrects the sequence 1, 2, 3, 4, 5 in Figure 1-2.

At the terminus of the eight-wave cycle shown in Figure 1-2 begins a second similar cycle of five upward waves followed by three downward waves. A third advance then develops, also consisting of five waves up. This third advance completes a five-wave movement of one degree larger than the waves of which it is composed. The result is as shown in Figure 1-3 up to the peak labeled (5).

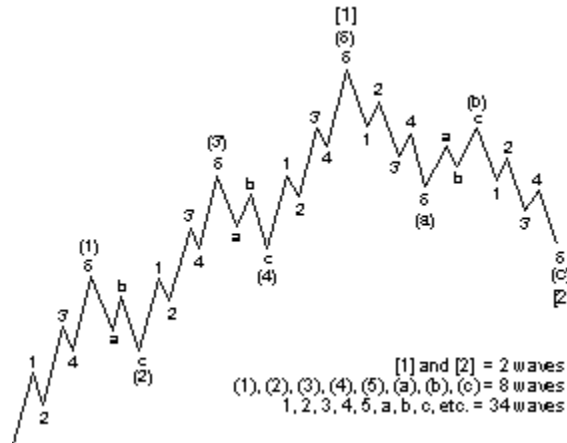


Figure 1-3

At the peak of wave (5) begins a down movement of correspondingly larger degree, composed once again of three waves. These three larger waves down "correct" the entire movement of five larger waves up. The result is another complete, yet larger, cycle, as shown in Figure 1-3. As Figure 1-3 illustrates, then, *each same-direction component of a motive wave, and each full-cycle component* (i.e., waves 1 + 2, or waves 3 + 4) *of a cycle, is a smaller version of itself.*

It is crucial to understand an essential point: Figure 1-3 not only illustrates a *larger* version of Figure 1-2, it also illustrates *Figure 1-2 itself*, in greater detail. In Figure 1-2, each sub wave 1, 3 and 5 is a motive wave that will subdivide into a "five," and

Each sub wave 2 and 4 is a corrective wave that will subdivide into a, b, c. Waves (1) and (2) in Figure 1-3, if examined under a "microscope," would take the same form as waves [1]\* and [2]. All these figures illustrate the phenomenon of constant form within ever-changing degree.

Every wave serves one of two functions: *action* or *reaction*. Specifically, a wave may either advance the cause of the wave of one larger degree or interrupt it. The function of a wave is determined by its *relative direction*. An *actionary* or *trend* wave is any wave that trends in the *same* direction as the wave of one larger degree of which it is a part. A *reactionary* or *countertrend* wave is any wave that trends in the direction *opposite* to that of the wave of one larger degree of which it is part. Actionary waves are labeled with *odd* numbers and letters. Reactionary waves are labeled with even numbers and letters.

All reactionary waves develop in corrective mode. If all actionary waves developed in motive mode, then there would be no need for different terms. Indeed, most actionary waves do subdivide into five waves. However, as the following sections reveal, a few actionary waves develop in corrective mode, i.e., they subdivide into *three* waves or a variation thereof. A detailed knowledge of pattern construction is required before one can draw the distinction between *actionary* function and *motive* mode, which in the underlying model introduced so far are indistinct.

Most impulses contain what Elliott called an extension. Extensions are elongated impulses with exaggerated subdivisions. The vast majority of impulse waves do contain an extension in one and only one of their three actionary sub waves. At times, the subdivisions of an extended wave are nearly the same amplitude and duration as the other four waves of the larger impulse, giving a total count of nine waves of similar size rather than the normal count of "five" for the sequence. In a nine-wave sequence, it is occasionally difficult to say which wave extended. However, it is usually irrelevant anyway, since under the Elliott system, a count of nine and a count of five have the same technical significance. The diagrams in Figure 1-5, illustrating extensions, will clarify this point.

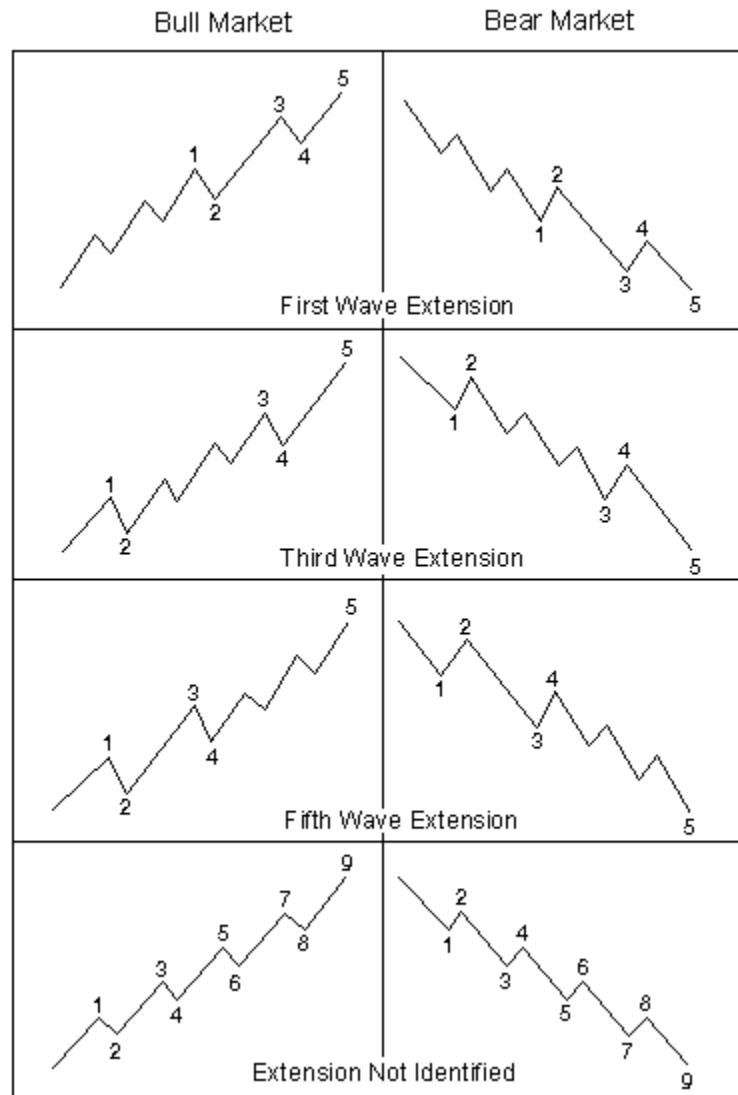


Figure 5

The fact that extensions typically occur in only one actionary sub wave provides a useful guide to the expected lengths of upcoming waves. For instance, if the first and third waves are of about equal length, the fifth wave will likely be a protracted surge. (In waves below Primary degree, a developing fifth wave extension will be confirmed by new high volume. Conversely, if wave three extends, the fifth should be simply constructed and resemble wave one.

In the stock market, *the most commonly extended wave is wave 3*. This fact is of particular importance to real time wave interpretation when considered in conjunction with two of the rules of impulse waves: that wave 3 is never the shortest actionary wave, and that wave 4 may not overlap wave 1. To clarify, let us assume two situations involving an improper middle wave, as illustrated in Figures 1-6 and 1-7.

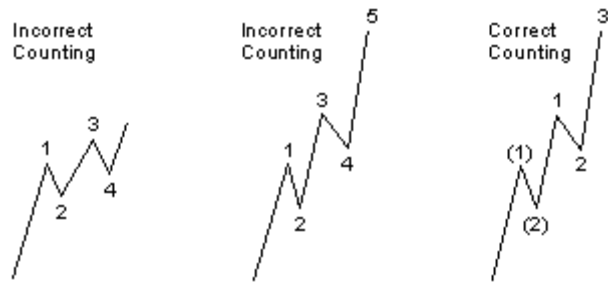


Figure 1-6

Figure 1-7

Figure 1-8

In Figure 1-6, wave 4 overlaps the top of wave 1. In Figure 1-7, wave 3 is shorter than wave 1 and shorter than wave 5. According to the rules, neither is an acceptable labeling. Once the apparent wave 3 is proved unacceptable, it must be relabeled in some way that *is* acceptable. In fact, it is almost always to be labeled as shown in Figure 1-8, implying an extended wave (3) in the making

Extensions may also occur within extensions. In the stock market, the third wave of an extended third wave is typically an extension as well, producing a profile such as shown in Figure 1-9. Figure 1-10 illustrates a fifth wave extension of a fifth wave extension. Extended fifths are fairly uncommon except in bull markets in commodities.

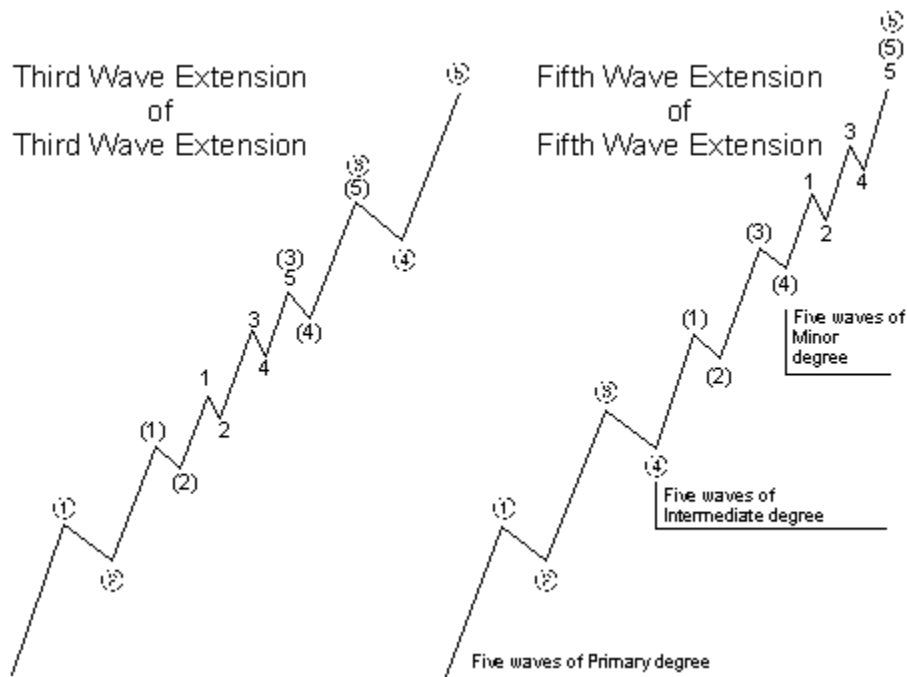


Figure 1-9 Figure 1-10

Elliott used the word "failure" to describe a situation in which the fifth wave does not move beyond the end of the third. We prefer the less connotative term, "truncation," or "truncated fifth." A truncation can usually be verified by noting that the presumed fifth wave contains the necessary five sub waves, as illustrated in Figures 1-11 and 1-12. Truncation often occurs following an extensively strong third wave.

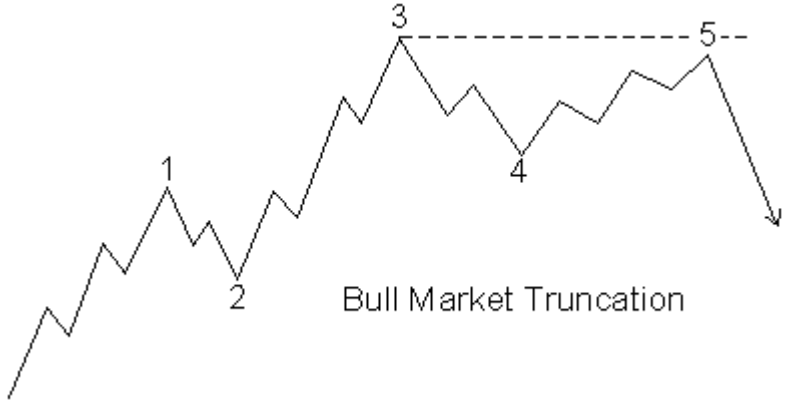


Figure 1-11



Figure 1-12

Markets move *against* the trend of one greater degree only with a seeming struggle. Resistance from the larger trend appears to prevent a correction from developing a full motive structure. This struggle between the two oppositely trending degrees generally makes corrective waves less clearly identifiable than motive waves, which always flow with comparative ease in the direction of the one larger trend. As another result of this conflict between trends, corrective waves are quite a bit more varied than motive waves. Further, they occasionally increase or decrease in complexity as they unfold so that what are technically sub waves of the same degree can by their complexity or time length appear to be of different degree. For all these reasons, it can be difficult at times to fit corrective waves into recognizable patterns until they are completed and behind us. As the terminations of corrective waves are less predictable than those for motive waves, the Elliott analyst must exercise more caution in his analysis when the market is in a meandering corrective mood than when prices are in a persistently motive trend.

The single most important rule that can be gleaned from a study of the various corrective patterns is that *corrections are never fives*. Only motive waves are fives. For this reason, an initial five-wave movement against the larger trend is never the end of a correction, only part of it.

Corrective processes come in two styles. *Sharp* corrections angle steeply against the larger trend. *Sideways* corrections, while always producing net retracements of the preceding wave, typically contain a movement that carries back to or beyond its starting level, thus producing an overall sideways appearance. The discussion of the guideline of alternation in Lesson 10 will explain the reason for noting these two styles.

Specific corrective patterns fall into four main categories:

*Zigzags* (5-3-5; includes three types: single, double, and triple);

*Flats* (3-3-5; includes three types: regular, expanded, and running);

*Triangles* (3-3-3-3-3; four types: three of the contracting variety (ascending, descending, and symmetrical) and one of the expanding variety (reverse symmetrical));

*Double threes* and *triple threes* (combined structures).

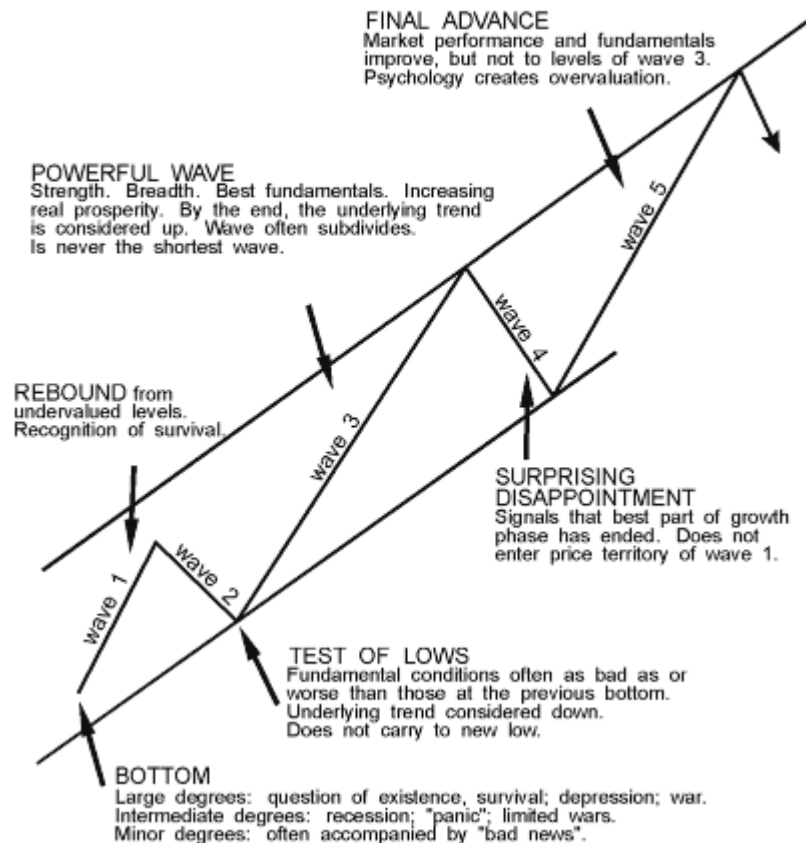
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The idea of wave personality is a substantial expansion of the Wave Principle. It has the advantages of bringing human behavior more personally into the equation and even more important, of enhancing the utility of standard technical analysis.

The personality of each wave in the Elliott sequence is an integral part of the reflection of the mass psychology it embodies. The progression of mass emotions from pessimism to optimism and back again tends to follow a similar path each time around, producing similar circumstances at corresponding points in the wave structure. The personality of each wave type is usually manifest whether the wave is of Grand Super cycle degree or Subminuette. These properties not only forewarn the analyst about what to expect in the next sequence but at times can help determine one's present location in the progression of waves, when for other reasons the count is unclear or open to differing interpretations. As waves are in the process of unfolding, there are times when several different wave counts are perfectly admissible under all known Elliott rules. It is at these junctures that knowledge of wave personality can be invaluable. If the analyst recognizes the character of a single wave, he can often correctly interpret the complexities of the larger pattern. The following discussions relate to an underlying bull market picture,. These observations apply in reverse when the actionary waves are downward and the reactionary waves are upward.

### Idealized Elliott Wave Progression

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**Conclusion:**

The above should furnish a bird's eye view about a few of the main Technical theories being primarily used to determine prospective trends in the share market. Besides the above, there are multiple indicators, signs, and formations etc that need careful consideration. We are including a general list of them in the FAQ section.

We expect the viewers and users of this website to study the above along with the FAQ page to understand factors causing fluctuation in the market and to correlate the same to actual.

There is a common belief that Technicals restrict trading. We are of the opinion that the fact is just the opposite. Users of Technical principles do get in to the market unbiased and hunt for tradable scripts and embark on such trades where positive outcome is more certain. This eliminates risky trades and maximizes profit prospects.

Often a debate is heard about prevalence of Fundamentals over Technicals. While not undermining Fundamental studies, which comprises of examining industry performance, Balance Sheet studies, judging P/E ratios etc, we have only a small reply to counter the same. The reply is simply a direction to refer to the first assumption of Dow theory which says: " *The average discounts everything*: The price of any script/stock reflects everything known about the security". In other words, what is referred to as Fundamental studies is nothing but the starting point of Technicals. One must realize here that any market function with its own dynamics of various economic forces and to base investment decision based on some financial data would tantamount to leaving a big gap of uncertainty factor with respect to future expectations.