



The following are the actual notes Sid Norris took while initially learning and studying:

“Elliott Wave Principle” by Frost & Prechter - 10th Ed. (2005).

Additionally, over a period of time, Sid inserted several pointers from reading and/or viewing numerous Elliott Wave educational materials presented by Wayne Gorman, Jeffrey Kennedy, Dave Allman, Dan Esconi, Rich Swannell, and others.

Chapter 1 - The Broad Concept:

The Basics:

- Ralph Nelson Elliott’s (1871-1948) Wave Principle states that repetitive forms (waves) within the financial markets are generated by man’s social nature/mass psychology, which is keyed to a mathematical law of nature, expressed by the Fibonacci sequence, and more specifically, the golden ratio (.618 & its inverse, 1.618). These forms/waves grow and decay independent of news.
- Progress (referred to in “Elliott” as motive & actionary waves) occurs in 5 waves, of which waves 2 and 4 are counter-trend interruptions. Regress (corrective/reactionary waves) occurs in 3 waves, with wave 2 being an interruptive wave. The complete advance and decline cycle is therefore 8 waves.
- The basic 8 wave form is fractal in nature. It is operating at all degrees (chart timeframes) simultaneously. See the Elliott Wave labeling system (p.27).
- In most impulses there is a 5-wave pattern which unfolds adhering to the following rules:
 - subwave 2 does not overlap the start of wave 1.
 - subwave 4 does not overlap the extreme of wave 1. Also, as a strong guideline, it is not advisable to assign a wave 4 label if there is *any* overlap of the territory of wave 1 *during* the 4th wave.

- subwave 3 is not the shortest of 1, 3 & 5
- Impulses are typically bound by parallel lines (p.30)
- In impulses, one of waves 1, 3 or 5 will likely extend substantially in comparison to the other two. In the stock market, wave 3 is most likely to extend, whereas in commodities, wave 5 is the more likely to extend.
- Rarely, a wedge shaped diagonal appears as wave 1, A, 5 or C. It is sometimes referred to as a diagonal triangle. In a diagonal, *both* trendlines slope/tilt in same direction (both up or both down). Most often, the trendlines lines converge (get closer together) as they extend. Sometimes the diverge (get further apart with time).
- Corrective waves come in 3 basic variations:
 - zigzag (5-3-5)
 - flat (3-3-5)
 - triangle (3-3-3-3-3)
- Corrective waves can combine into more complex combinations labeled W-X-Y or W-X-Y-X-Z.
- In impulses, wave 2 & 4 nearly always alternate in form, one being of the sharp (zigzag or zigzag combo) family, and the other being of the sideways (flat, triangle or mixed combo) family.
- Each wave label exhibits a unique personality, characterized by volume, momentum, and sentiment. Sometimes the pattern's end differs from the associated price extreme. Always label and draw trendlines & Fibonacci's correctly by using the *orthodox* (labeled) end of waves.

Impulse Waves:

- Extension: in impulses, usually just one of waves 1, 3 or 5 extend. Wave 3 is the most likely to extend. Rarely, both 3 and 5 extend. Extensions can occur within extensions. For instance 3 of 3. Sometimes, at the end of an impulse in which one of the waves extended, there are 9 total waves, and it is difficult to determine which wave extended. There also can be extensions within extensions. 5 in extension manifests itself as 9, 13, 17, etc. 3 in extension can appear as a 7, 11, 15, etc. If neither wave 1 or 3 is extended, expect wave 5 to extend, especially if volume is greater in the 5th than the 3rd.
- Truncation: when the 5th wave does not reach beyond the 3rd wave. Occurs most often after a particularly strong 3rd wave. The wave 5 must still contain the necessary 5 subwaves. The message truncations send is that there is tremendous pressure to start the new trend. Expect big moves after truncations.

- Diagonal: subdivides 3-3-3-3-3. Notated with digits 1-5. Signals an imminent major trend reversal.
 - An ending contracting diagonal appears at the termination point of larger movements, most often as wave 5, and rarely as wave C. An expanding diagonal has only occurred only once in the stock market. Wave 5 often over-shoots, and upon rare occasion, falls short of its resistance trendline. If it does fall short, the reversal will be more severe. Ending diagonal triangles indicate exhaustion of a larger pattern that moved too far too fast. Ending diagonals are usually followed by a quick thrust which retraces to the starting level of the diagonal.
 - A leading diagonal (3-3-3-3-3) occasionally appears in the wave 1 (or A of zigzags) position. There are only two historical instances where there was a diagonal triangle Type II which sub divided 5-3-5-3-5, in which case it was a wave A of a zigzag ABC bear market rally that was preceded and followed by strong downward movements. Beware: what appears to be a leading diagonal is usually a 1-2-1-2 instead. Leading diagonals are typically deeply retraced, and if in wave 1 position, are typically followed by a zigzag retracement of 78.6%.
 - Wave 3 is never a diagonal.

The Most Typical Fibonacci Ratios/Multiples within Impulses: (from Chapter 4: Ratio Analysis):

- If wave 1 is extended, expect the net of wave 2-5 to be $.618 \times$ wave 1
- Wave 2 = $.618$ or $.5 \times$ wave 1
- If wave 3 is extended, waves 1 and 5 tend toward equality. A $.618$ relationship is next most likely.
- Wave 3 = 1.618 or $2.618 \times$ wave 1
- Wave 4 = $.382 \times$ wave 3
- Wave 4 (net) typically relates to its corresponding wave 2 (net) by a Fibonacci ratio.
- Wave 5 = wave 1, or $.618$, or $.382 \times$ the net of waves 1 thru 3.
- If neither wave 1 or 3 is extended, expect wave 5 to be $1.618 \times$ the net of 1-3.
- The *time* to complete waves 1 thru 3 = the time to complete the end of 3 to the end of 5.

Corrective Waves:

- Corrective waves are more varied than impulse waves, contain choppy overlapping waves, and are more difficult than impulses to count correctly in real-time. They are generally not high-confidence areas in which to make predictions. Avoid things that can hurt you!
- Corrective waves are never 5's.
- An initial 5-wave move against the larger trend is never the end of the correction, only a part of it.
- Corrective moves come in two styles, which almost always alternate in waves 2 & 4:
 - Sharp: steeply angled, made up of a zigzag, or double or triple zigzag. Usually .618 or .500.
 - Sideways: horizontal in nature. Consists of a flat, a triangle, a double three, or a triple three. Triangles never appear alone as wave 2. The final move of sideways corrections always "correct" the extreme of the preceding wave by at least one pip., and typically contain a movement back to or beyond its starting level, often creating a new high or low during the phase.
- Corrective patterns fall into 3 categories:
- Zigzag (5-3-5) sharp. Most common in wave 2's. If the 1st zigzag doesn't retrace sufficiently, there may be a double or triple zigzag. Wave B will not surpass the origin of A. C moves well beyond the extreme of A. Zigzag and double and triple zigzags produce a persistent move against the larger trend.
- Flat (3-3-5) sideways. Most common in wave 4's. There are 3 types:
 - Regular Flat: B terminates near the start of A. C terminates slightly beyond the end of wave A.
 - Expanded (Irregular) Flat: (actually far more common than reg. flat). B terminates beyond the start of A, and C ends more substantially beyond the end of wave A. Bear market expanded flats may be referred to as an inverted expanded flat.
 - Running Flat: (very rare). B terminates well beyond the start of A, but C falls short of the end of wave A. BEWARE: if B breaks down into 5 waves, it is more likely a wave 1 of an impulse of the next higher degree. A Running Flat (sometimes referred to as an Irregular Flat – Type II by Prechter) essentially exhibits a failure (truncation) in wave c, and although rare, usually appears as a wave 2, because wave 3 just can't wait to get underway.

- Triangle (3-3-3-3-3) sideways. Triangle waves are notated with letters A through E, and consist of 5 overlapping waves. Indicate a triangle on your chart by drawing trendlines connecting A & C, and B & D. Triangles take up a lot of time. Wave E will likely over or under-shoot the trendline. If E overshoots, it cannot surpass the extreme of C. If it does, it is not an E wave in a triangle. At wave E's end, *all* triangles affect at least a one pip corrective result from the end of the preceding wave (wave 3, for instance). There is usually a post-triangle terminal thrust from the extreme of E equal to the width of the trendlines at the starting point of the triangle. Most subwaves are zigzags, although wave C is often a more complex double zigzag. One of the subwaves (usually E) can itself be a triangle, which results in labeling of A-B-C-D-E-F-G-H-I. *Triangles always occur in a position prior to the final wave in the pattern of one larger degree*, most often wave 4 of an impulse, but also B of an ABC, or the final X in a double or triple three. A triangle may also occur as the final actuary pattern in a corrective combination. Triangles never appear alone as wave 2. If wave B makes a new high or low, it is called a running triangle. There are 3 types of triangles:
 - Contracting – the upper trendline is sloping down, the other up. (If B overshoots A, it's called a *running* contracting triangle).
 - Barrier (either the upper or lower line is virtually horizontal). The horizontal line will be the line that will be broken after the E wave is complete.
 - Expanding (the upper & lower trendlines diverge, the upper sloping up, the other down). Wave E must move beyond the extreme of C in Expanding Triangles.
- There can be combinations of corrective patterns. Combinations are generally horizontal in nature. Each pattern within the combination is connected by a 3-wave corrective movement (most often a zigzag) labeled X. Each “three” in combinations can be a zigzag or flat. Triangles only appear as the final wave in combinations. The forms generally alternate. There is never more than one zigzag or triangle in a combination. The two types of corrective combinations are:
 - Double three (labeled W-X-Y). Extends the duration of the correction.
 - Triple three (labeled W-X-Y X-Z) (rare). Extends the duration even further.
- If there are a number of similar waves in a row that are difficult to label, remember that a double zigzag will have 7 waves, and triple zigzag has 11.
- Sometimes volume spikes at the end of corrections, but more often it drops off.

Chapter 2 - Guidelines of Wave Formation: (Guidelines aren't rules, they guide to what is *probable*)

Alternation: (expect a difference in the next expression of a similar wave):

- If wave 2 is sharp, expect wave 4 to be sideways, and vice versa, except inside triangles, where alternation of 2 & 4 does not occur.
- If wave 2 is sideways, a triangle *can* appear as wave 4 and still fulfill alternation, but this is less likely. (Triangles alternate with everything else).
- If wave 2 is simple, expect wave 4 to be a complex combination, and vice versa.
- One of the 2 corrective waves within an impulse will likely retrace the entire last impulse (of one lesser degree?), the other will not.
- Extension is an expression of alternation. Typically wave 1 is short, 3 long, and 5 short. If wave 1 is extended, 3 and 5 will likely not be extended. If 1 and 3 are not, 5 will likely be.
- Within corrective ABC waves, if A is a flat, expect B to be a zigzag and vice versa. If A is simple, expect B to be a more complex combination, and C even more complex, or, the complete reverse: most complex-complex-simple, although this is not as common as increasing complexity.
- Rich Swannell, in his Elite Trader Secrets book contends that alternation only takes place 61.8% of the time. He contends that the culprit causing this somewhat low percentage is that when wave 2 is sideways, there is a 78% chance that wave 4 will be sideways as well!!! In his 20 years of research, this is the only significant statistical anomaly he found comparing real-time analysis to Elliot's original guidelines.

Depth of Corrective Waves:

- Corrections (especially 4th waves) tend to retrace to within the span of the previous 4th wave of one lesser degree.
- If the 1st wave of a sequence extends, the correction following the 5th wave of the sequence will retrace no further than the extreme of wave 2 of a lesser degree (wave 2 of the 5th).
- After 5th wave extensions, the ensuing correction will likely be sharp and swift, and will end near the extreme of wave 2 *of the extension*. This does not apply when the market is ending a 5th wave simultaneously at more than one degree.

Wave Equality:

- 2 of the motive waves in a 5-wave sequence tend toward equality in time and magnitude. If equality is lacking, a .618 relationship is next most likely. Usually wave 3 is extended, so wave 1 and 5 are often nearly equal in amplitude and duration.
- Waves A and C of a correction tend toward equality. $C = 1.618 \times A$ is next most likely.

Channeling:

- A parallel trend channel typically marks the upper and lower boundaries of impulse waves.
- When wave 3 ends, connect 1 & 3, and place a parallel line thru 2. This provides an estimated boundary for wave 4. When wave 4 ends, connect 2 & 4, and place a parallel line thru 3. This will forecast the end of wave 5. If wave 4 moves out of the channel, expect wave 5 to be a throw-over. (WG) Alternative method for projecting the end of wave 5: if wave 3 is abnormally strong (vertical) *and* wave 4 is sideways, connect 2 and 4, and draw a parallel line that intersects the extreme of wave 1. This will project the end of wave 5.
- Trendlines can also help with zigzags. Connect the origin of A with point B, and place a parallel line through point A. This will project the end of C. (Wayne Gorman)
- Remember: It's not over until wave 5 of 5 of 5 is finished. The wave count takes precedence over channel lines and projected Fibonacci targets.
- Wave 5's can "throw-over" or "throw-under", depending on volume. During a "throw-over", it is difficult to identify waves of smaller degrees, as channels lines are penetrated.

Volume:

- Late in a corrective phase, a decline in volume often indicates a decline in selling/buying pressure, and coincides with a turning point in the market.
- Of the impulse waves, 3rd waves almost always exhibit the greatest volume. If volume during the 5th wave is as high as the 3rd, expect an extended 5th wave.
- Volume during corrective patterns will generally dry up during triangles and combinations, and will climax during A waves, and during wave 3 of C.

The "Right Look":

- If wave 4 terminated well above the top of wave 1 in a 5-wave move, it must be labeled as an impulse.

- It is extremely dangerous to accept a wave count that represents disproportionate wave relationships or a misshapen pattern.
- The right look may not be evident at all degrees of trend simultaneously, so focus on the degrees that are the clearest.
- You need short term charts to analyze subdivisions in fast moving markets, and long term charts for slowly moving markets.
- When re-working your count, always start from a significant bottom. (WG)
- Movements *with* the larger trend subdivide into 5. Movements *against* the larger trend subdivide into 3. (DA)
- The belief that there is only one direction the market can take, and the refusal to consider alternatives is a recipe for trouble. (DA)
- Its not over until the 5th of the 5th of the 5th of the 5th is complete. Confirmation that a trend change has occurred of a certain degree comes with a 5-wave move of one lesser degree in the opposite direction.

Wave Personality:

- At times, more than one wave count is admissible, making wave personality invaluable in determining the preferred count:
- 1st Waves: unfold in a 5-wave impulse. Part of a basing process. “Maybe we’ll actually survive this after all.” Most, however do not believe that the trend has changed.
- 2nd Waves: unfold in a 3-wave corrective fashion, and usually deeply retrace wave 1. The masses are convinced that the old trend is still in force, and pessimism is even worse than the origin of 1. “Here we go again.” Wave 2’s end up exhibiting low volume/volatility, with sentiment (the put/call ratio) at its low. Wave 2’s provide a great trading opportunity!
- 3rd Waves unfold as a 5, and are strong, broad, and steep. Optimism returns. Economic fundamentals improve. At about the middle of wave 3, there is mass recognition that a new trend is underway. This is when volatility is at its highest. MACD will usually confirm wave 3 peaks.
- 4th Waves unfold as a 3, and are predictable in depth and form due to alternation from the 2nd wave. They are very likely sideways affairs, and are building a base for the final 5th wave. They are accompanied by a surprising disappointment because the advance did not continue.
- 5th Waves unfold as a 5, and are less dynamic than wave 3’s, unless the wave 5 is an extension. Volume is less than wave 3, but optimism/pessimism is at its highest, although fundamentals aren’t as good. Wave 5’s are typically accompanied by MACD

divergence. FYI: wave 5's in commodities are stronger than wave 3's, and are driven by fear.

- “A” Waves unfold as 5's if the beginning of a zigzag, or 3's if the beginning of a flat or triangle. Arrogance and complacency is lingering. Most are convinced that it is just another pullback before the larger trend continues, although they are often sharp, and can retrace more than the previous impulse wave. “A” waves following extensions on commodities are often crashes. “A” waves do not kill the hopes associated with the old trend though. MACD will be deeper at the end of “A” waves than it was during the previous waves 2 or 4.
- B Waves unfold as 3's, and are sucker plays, especially in expanded/irregular flats. The masses believe the up-trend has resumed. Wave B's are usually zigzags, and the next most likely is a triangle.
- C Waves unfold as 5's (unless part of a triangle, or rarely a diagonal), and are strong like a wave 3. The illusions held through A and B quickly evaporates into fear. Near the end of C, the corrective phase will be widely mistaken for a new overall trend.
- D Waves are 3's are accompanied by expanding volume, and are phonies, like wave B's.
- E Waves are 3's, and are often mistaken as a kickoff of a new trend (because of the typical throw-over). News often coincides with the overshoot, and caused the masses to join the wrong side of the trade at the worst moment.
- X Waves connect corrective waves into combinations, and consist of any type of 3 wave corrective structure, but are most often a zigzag. An X, being a 3 wave move, signals that the correction is not over yet.

Fibonacci Relationships (from Chapter 4: Ratio Analysis):

- Fibonacci relationships of waves moving in the same direction are more important than Fibonacci retracements.
- The most typical corrective Fibonacci Ratios are:
 - In a zigzag, $C = A$, or $1.618 \times \text{wave A}$, or $.618 \times \text{wave A}$ (in that order)
 - In a regular flat, A, B & C are each nearly equal
 - In an expanded flat, $B = 1.236$ or $1.382 \times A$
 - In an expanded flat, $C = 1.618 \times A$ (very common!) Sometimes C will overshoot A by $.618 \times A$.
 - In a contracting triangle, $B = .618 \times A$, $C = .618 \times B$, and $D = .618 \times C$.
 - In an extremely rare expanding triangle, the ratio is 1.618.

- In double and triple corrections, the net travel of one simple pattern related to the next by equality, or if one of the 3's is a triangle, by .618.
- Rich Swannell's research showed that stock market wave 2's are most likely to retrace wave 1 by 38.2%, and are about twice as likely to retrace 38.2% than 61.8%. 2nd waves are widely varied in the percentage that they retrace.
- Wave 4 retracements of wave 3 are generally more predictable. A .382 retracement is most common, and as little as a .236 is next, especially if it is a wave 4 following a larger wave 3. Also, wave 4's very often retrace to the about the end of the previous wave 4 of a lesser degree, for instance wave 4 of a larger wave 3.
- The 5th wave, if the longest, typically travels 1.618 the distance of from the start of wave 1 thru the end of wave 3.
- Wave 3 will often be 1.618 x the length of wave 1. 2.618 is also common.
- Wave 5 will often be equal to wave 1 if wave 3 is extended.
- Prechter, despite mighty efforts, has not been able to produce anything useful as far as Fibonacci *time* relationships. Check out Carolyn Boroden or Glenn Neely's work for that.

Percentage Retracements and Extensions (from Rules and Guidelines – p. 86-91)

- In a diagonal, waves 2 & 4 each usually retrace .66 to .81 of the preceding wave.
- In a zigzag, wave B typically retraces 38-79 percent of wave A.
- In a zigzag, if wave B is a running triangle, it will typically retrace 10 to 40 percent of wave A.
- In a zigzag if wave B is a zigzag, it will typically retrace 50 to 79 percent of wave A.
- In a zigzag, if wave B is a triangle, it will typically retrace 38 to 50 percent of wave A
- In a flat, wave B must retrace at least 90 percent of wave A. This is a rule.
- In a flat, wave B usually retraces between 100 and 138 percent of wave A.
- In a flat, wave C is usually 100 to 165 percent as long as wave A.
- In a flat, when wave B is more than 105 percent as long as wave A, and wave C ends beyond the end of wave A, the formation is called an expanded flat.
- In an expanding triangle, subwaves B, C, and D each retrace at least 100 percent but no more than 150 percent of the previous subwave.
- In an expanding triangle, subwaves B, C, and D usually retrace 105 to 125 percent of the preceding subwave.

Memorable Quotes from Chapter 3 - Historical and Mathematical Background:

“When you have eliminated the impossible, whatever remains, *however improbable*, must be the truth.” - Sherlock Holmes

“Trading with Elliott Wave Principle helps you remain both flexible and decisive, both defensive and aggressive, depending on the demands of the situation.”

“The Elliott Wave principle is a means of first limiting the possibilities, and then ordering the relative probabilities of possible future market paths.”

“Because applying the Wave Principle is an exercise in probability, the ongoing maintenance of alternative wave counts is an essential part of using it correctly.”

“Of course, there are often times when, despite a rigorous analysis, there is no clearly preferred interpretation. At such times, you must wait until the count resolves itself.”

Refer to the Summary of Rules and Guidelines for Waves (p.86-92) During Wave Counting!

