

# BREAKTHROUGH **STRATEGIES** for PREDICTING **ANY MARKET**

SECOND EDITION

Charting Elliott Wave, Lucas, Fibonacci,  
Gann, and Time for Profit

JEFF GREENBLATT

FOREWORD BY DAWN BOLTON-SMITH

WILEY



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Fibonacci, Gann, and Time for Profit

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**Jeff Greenblatt**

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*To my wife, Jeanne, son Josh, and my parents, Henry and Janet. They've always been there through good times and bad. This book is also dedicated to the memory of Beatrice Heffron.*



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## FORWARD

**I**t was indeed a privilege to write the foreword for the first edition of *Breakthrough Strategies for Predicting Any Market* and now an even greater privilege to update it for Jeff's new book. As a long-term subscriber to his free bi-weekly *Fibonacci Newsletter* and his *Fibonacci Forecaster* updates on stocks, commodities, and foreign exchange. I believe these are compelling viewing for his wonderful display of charts and commentary in a format extremely beneficial for traders and investors.

I can say now I have been a practicing Technical Analyst since 1964 and in that time have experienced three major stock market crashes. There are always lessons to be learned and one has to be a step ahead of the crowd. It is much better to be able to use foresight rather than hindsight, which most economists are not able to do. I therefore feel well qualified to pass judgment on Jeff's latest book.

As a complete novice in 1960 making my first stock market investments when the broker said the market was high, I was soon to find out that I had been buying at the top of a nine-year bull cycle.

In the wake of the 1961 credit squeeze in Australia, the stocks came tumbling down. I realized I had to find out more about markets so I enrolled in the pilot course of the Sydney Stock Exchange at Mosman Evening college only to learn after several years that P/E ratios, earnings, and dividend yields were meaningless if you didn't get the timing right. Our group threw in five shillings each to a subscription to *TRENDEX*, a technical newsletter and studied *Technical Analysis of Stock Trends* by Edwards and Magee, which laid my foundations for the exciting career path I have enjoyed since 1964. I was the first Technical Analyst to be employed by an Australian stockbroker

and the course was set to later move into commodities for the gold top in 1980 and later foreign exchange for the Australian Dollar.

I believe my hands-on experience, including the three major stock market crashes, enables me to pass a sound judgment on the real value of Jeff's methodology and his amazing contribution to Technical Analysis. I gave the first lectures for the Securities Institute course at the Sydney Stock Exchange and over the decades have contributed regular articles in newspapers, newsletters, and futures magazines. Since 1998 I've had a regular bi-monthly column in *Your Trading Edge*.

Without any knowledge of the global financial crisis, I pinpointed the 2007 to 2008 major top in the stock market and 2009 bottom using trend lines and pattern recognition, coupled with experience—the best teacher. I was also a founding member of the Australian Technical Analysts Association.

My mentors over the years included Ian Notley (Mosman Evening College), Dr. Harry D. Schultz, David Fuller, J. Welles Wilder, Dr. Mircea Dologa, Phyllis Kahn (who introduced me to W.D. Gann), and more recently Michael S. Jenkins who made me aware of the importance of timing the cycles and geometry in the markets. My own claim to fame was predicting the 1974 share crash and calling the bottom within 4 points. I was writing for the *Sunday Telegraph Newspaper* at the time and the lead article July 21, 1974 "Stand by for a Crash—Dawn tips a 30's style share slump". I would hasten to say that the market was setting itself up in October 14, 1973. No fancy indicators, but just good basic charts and pattern recognition.

When I started in the early 1960s there were only three textbooks, and now my bookshelves have run out of space. It is somewhat a daunting task when confronted by the incredible display of books and courses all centered on markets and making money to determine what book is right for you. I firmly believe that Jeff's books fill the gap left by many technical trading systems and are *not* to be left on the bookshelf.

His new book is a remodel of the original where he has enhanced almost every chapter, added chapters on Square of Nine, price and time symmetry, Andrews, and psychology. It is written for the intermediate to advanced trader but leaving a lot of the MACD work in there. He prefers not to use lagging indicators anymore, and the idea of this book is to build a bridge for those who want to wean themselves from lagging indicators and learn to master markets from a pure pattern-recognition view. With the charts, this is a monster book of more than 400 pages.

He uses candlesticks, which he believes tell you more about market behavior than basic line charts. The importance of the 200-day simple moving

average and the 20/50 day used by the big money crowd which is a good place for price action to hold are both explained. The extremely important chapter on Fibonacci price projections leaves the academics and fundamental analysts behind. He discusses how to make high-probability price projections based on the natural tendencies of universal law. He looks at support and resistance levels as well as moving averages, and many times the 50- or 200-day moving averages will be within pennies of one of the Fibonacci retracement points.

Now on psychology—if your mind isn’t right, there is no methodology in the world that will work, and the chapter that focuses on the lessons learned by the author from different mentors in the field of psychology and mental toughness are priceless tools, not only in trading but in life.

History has shown us that people starting out in trading to get rich with no formal training think it is all very easy. They learn quickly that it’s not and it can be easier to lose money than make it.

Most of the material and charts in this book needs to be studied for hours upon hours. That it is the only way you are going to learn the true nature of how these financial markets really work. But once mastered, you will never look at a chart in the same way. You will have the potential to become very profitable; you will even do better. *Potential* means having the ability to do the right thing at the right time. There is a lot of noise out there, and your biggest enemy besides yourself will be the maddening voice of the crowd. You need to listen to them, yet ignore them at the same time and interpret what they really mean. Edwards and Magee said there are times to “board up the windows.”

When it comes to commodities, absolute fear is usually a top and in the stock market absolute fear is usually a bottom. When the experts tell you stocks are going to the moon, it is time to think about short positions, but you still have to wait for the appropriate signal. Our minds need to be trained to take trades intelligently in psychologically uncomfortable positions. The author’s choice of the best work on the psychology of trading is *Trading in the Zone* by Mark Douglas. The other is *New Trading Dimensions* by Bill Williams. Each one teaches you how to get into a “flow” state of mind in order to tune out all distractions, fears, and anxieties and to get into rhythm with your highest potential. This means getting rid of a fair degree of mental garbage. This chapter is one of the finest I have read on the psychological aspects of trading, with explanations of how to deal with some of the problems faced when pulling the trigger. To summarize, we need to know where we came from and where we are going. Trading

is never going to be easy, but it can be simple, and this chapter should mentally equip you to participate.

The final chapter ties together some of the highest probability setups so you can start using this wonderful methodology right away. This is where the author congratulates you if you are still with him because the book is not an easy read and is not supposed to be. The dozens of charts are meant to be studied over and over until you get it. To make money, you must develop from being an average trader and this book will take your knowledge of charts from mediocre to great. The whole point of this book is to demonstrate a different way of looking at charts. News events somehow manifest themselves at precisely the correct point in time on a price chart. Jeff reports that he can no longer look at a price chart without keeping track of the bars, and his goal is to take you to this level of market precision.

Everything you need on a technical basis has been covered and the new language will enable you to wait for better setups. By drawing your extension lines and keeping track of the bars, you will come to anticipate turns and not take action until the candles confirm your various price and time clusters. When they do—*pull the trigger!* You will learn to trust the chart and the methodology and have the courage of your convictions to stick with the trade. Over time you are going to have lots of fun! The author knows—all this happened to him.

The goal of this book is to give you a full and complete understanding of how financial markets work. Whether you are an Elliottian, moving average trend follower, volume studies practitioner, or believe in any discipline, you are only dealing with “what to do”. This book will teach you “when to do it.”

In short, you now have in your hands an incredible pattern-recognition system, perhaps the *best* on the planet! Mastering financial markets takes quite a bit of time and energy during and after trading hours. Jeff studies the cycles on the indexes every single day to know what is going on. As repeatedly stressed in this work, you will need to study these charts and your own charts constantly in order to find the right setups. It takes dedication and work, but if you put in the effort, you will find that this book will make you a better and more profitable trader, because you will be fluent in the language of the market. On my previous prediction, there is little doubt that Jeff’s achievements will most surely take him to the Hall of Fame as one of the true Market Masters of the twenty-first century. This volume deserves a place on the bookshelves of every trader and investors.

Dawn Bolton-Smith

## P R E F A C E

The inspiration for the first edition of this book came about in 2005 and 2006. As you remember it was a bull market nobody anticipated and lots of people attempted to get short and you can't really blame them. Many of them got their real initiation into financial markets after the Internet bubble popped. All they really knew was being a bear.

Many of the people who embraced methodologies like Elliott and Fibonacci were very bearish. It worked for a couple of years and then it stopped working. Many had no idea why. Truth be told, one of the reasons seasoned traders are able to capitalize on opportunities is because they've seen prior bull and bear markets and know how to react at specific times in history. A trader won't be really seasoned until they've been through at least two complete bull and bear cycles. Traders tend to be influenced by what they've experienced. Many traders who were around in the middle of the last decade were influenced by the Internet bubble, where everyone made money but few kept it. Others were influenced by the bear and expected it to continue. Once it turned around in 2003, they were ill equipped to deal with a new bull market. The psychology of bear markets suggests traders, policy makers, and the mass crowd psychology overall will be scarred by the experience.

Compounding the problem were traders at the intermediate level who still used lagging indicators like stochastic and MACD. The problem was that the MACD divergences persisted for a long time. As you will see, many of them extended for weeks and even months. In those days many people shorted those divergences and lost a lot of money.

In the first edition, I addressed the issue by introducing the time element in technical analysis. For some people—there was an element of the trading community that was well versed in the time element of technical analysis—this was nothing new. However, there was and still is a bigger segment of the trading community that doesn't embrace the time element of technical analysis. This is known as the random walk crowd who believes that one must be invested at all times in order to capture the big moves in the markets. If there are 10 really big days a year, they claim it's impossible to time them so one must be in the market at all times. Random walk people believe *everything* that happens in the market is random.

That's not true because if nothing else, if you read the first edition you would have learned how time windows work and been able to recognize the October 2007 top which came in at 262 weeks. For months leading up to that window I told whoever would listen that an important pivot was coming up that autumn. I said it could have the potential to be the most important market turn of the decade. I was wrong. It turned out to be the most important pivot of our *generation*. The 2007 turn was the lead-in to the financial crisis and the timing of it was anything but random. In fact the two most important events of the crisis—the Lehman Brothers bankruptcy and TARP vote—both came 233 trading days off the respective tops in the Dow and NASDAQ. I've never seen anything like it.

Unfortunately, even one cycle later there were still those who didn't learn the lesson from the bull years of 2002 to 2007. As late as 2011, Euro bears (at least in the equity side) were looking for the European crisis to replicate the Lehman disaster of 2008. It never happened and here I'll show you why in terms of the pattern calculations and the psychology. If you haven't been through two bull and bear markets, I hope you'll gain valuable information from my experience.

Getting back to 2007, if you learned how to recognize an important turn and got out of the market in time, the first edition served you well. However, since the first edition came out I noticed that not all turns materialized on a Fibonacci or golden spiral time window. I wanted to know why. My study and research led me to Gann, who was probably the greatest stock market mind of the first half of the twentieth century. The fact that Gann existed and people still think markets act randomly is a dynamic I don't understand. But Gann didn't make life easy on himself or anyone else.

Imagine you purchased his expensive course back in the day. What he did was essentially come to your house and drop a 5,000-piece jigsaw puzzle on your dining room table and left leaving you to figure it out. He

wanted you to do your due diligence. It would take people years to figure out what he was talking about if they ever did. Through Gann's work, I figured out how to make our time windows more effective. That's the biggest and most important breakthrough in this new edition. I've presented it in a way that shouldn't take you years to figure out. I've boiled down the most important concepts that will get you up and running in a relatively short period of time. But it depends on you. You'll still have to study the charts. But at least you'll know what to look for.

Most of the chapters have been remodeled and enhanced. I've added chapters on Gann and Andrews, which I believe is an excellent GPS system to navigate tough-to-follow patterns. We've covered the financial crisis so you can understand what happened. It may just help you spot the next one if it ever happens. There are strategies here to capitalize on the numerous opportunities you will be afforded by financial markets. I've also greatly enhanced our discussion on market psychology and sentiment because I believe it's more important than the fundamentals.

The idea of this book is to be true to the original vision and brand of the first edition but build a bridge to the more advanced concepts that open you up to greater opportunity. While each chapter builds on the prior, feel free to skip ahead. If you are an intermediate-level trader and you have only worked with a MACD, I urge you to use the more advanced concepts in the Gann chapters side by side and see the difference for yourself. If you are more curious about the Gann timing principles, feel free to skip ahead. The idea is to understand the bigger picture of the market and then scale down to your individual trading opportunities.

Markets are as challenging now as they've ever been. Our vision here is to give you a toolbox big enough that you have one more tool than the market has problems.

## ■ Audience

Traders lose money for many reasons. One of the big ones is they don't recognize important turns. Not even huge hedge funds are immune. Institutions and retail traders give back huge gains. To the retail trader, it could be in the thousands while the hedge fund gives back hundreds of millions. Every market has at least one or two important turns in a year and this book greatly closes the gap so that shouldn't happen. To those of you who've wondered about the mysteries of Gann, it shouldn't take years to apply—your learning

curve will be shortened by months or even years. Those who really want to can understand the link between how the media portrays market sentiment and how it applies to where we are in the current trend. Bull markets climb a wall of worry but slide down a slope of hope. Everyone knows that but you'll learn how to interpret headlines to understand where the market is in its progression. Ultimately, those of you who want to understand how the bigger picture (the macro) works with your opportunities (the micro) will find cutting-edge ideas.

## ■ What's New to This Edition

We've included chapters on Gann, Andrews, median channels, and market sentiment/psychology. We've found Andrews' work to be an excellent GPS system in order to understand how trends evolve. There are instances where it's hard to even understand what the trend might be without putting a median channel on the price chart. We've included Gann range and time square as Gann himself considered this to be his "most important discovery." We've found it greatly closes the gap in our understanding of market timing since the first edition. It won't take years to learn and you'll find yourself applying these principles in a relatively short period of time.

Understanding a price chart is tough enough, but some make it more difficult as they don't consider the price action to be a representation of human emotion. We'll examine market psychology so you can better marry the current sequence of the pattern to the headlines to understand where we are in the near term as well as the long term. Greater market timing skills will open up a world of opportunity as well as save you money by allowing you to better recognize important turns.

## ■ Overview of the Web Site Contents

If you're interested in learning more about some of the market movements discussed in the book, you can go to the book's companion web site at [www.wiley.com/go/greenblatt2e](http://www.wiley.com/go/greenblatt2e) (password wiley13) and download PDF versions of six of my *Short Term Update* newsletters.

The newsletters cover the various financial markets using the methodology in this book. If there is one constant in all financial markets, it is change. However, markets always work the same way. They are like snowflakes, very similar but never exactly alike. You'll get a chance to look over my

shoulder and see how we analyze markets as they evolve. The newsletters we've picked show how we identify market turns as they evolve. You'll see how a news event like the fiscal cliff negotiations clustered with the Gann calculations to end the late 2012 correction. You'll also see how the world may have been expecting a rally based on the Osama Bin Laden news yet the markets had something else in mind. The turn in May 2011 was so important that most everything that was going up turned down and what was going down (U.S. Dollar) reversed into a major rally. News events are one thing, but markets won't turn for real unless the underlying structure of financial markets has price and time lined up.

You can also go to [www.lucaswaveinternational.com](http://www.lucaswaveinternational.com) for more information on Lucas Wave International.



## ACKNOWLEDGMENTS

Nature abhors a vacuum. Anything worthwhile happens only due to the efforts of others. In my case, I would like to thank the following people for their efforts along the way.

First of all, a special mention goes to Evan Greenberg. Several years back, as a caller I challenged him on 1510 KFNN in Phoenix, Arizona. As opposed to getting mad, he invited me on his show for a full hour to talk about technical analysis. He's a great guy. That day, KFNN host Sinclair Noe gave me some of the best advice I've ever received in my life. He told me if there was something I wanted to do, I should just start doing it. I started my *Fibonacci Forecaster* newsletter that day. Sinclair has had me on his show many times since then and deserves credit for giving new blood a chance.

In the early days people like Gary Kaltbaum, Mark Leibovit, and Sean Balog offered encouragement that kept me going. Later on it was Yelnick who included me in his excellent blog. The fact that he thought enough of my work to compare it to the better-known Elliotticians in the field helped get it to a broader and international audience. At one point, the timing work you are about to learn as a market leading indicator foretold a time window for an important rally that could end on a specific date. When the market did turn on that date my email box was flooded with inquiries from all over the world, mostly the United States and Australia. I had no idea why until I found out it was Yelnick putting out the good word. You can still find him at [www.Yelnick.tyepad.com](http://www.Yelnick.tyepad.com).

One of the people who responded that day was Dawn Bolton-Smith from *Your Trading Edge* magazine in Australia. I never heard of this magazine but readers started emailing me to say that Dawn was saying nice things

about my work in her column. I soon found out that *Your Trading Edge* was a cutting-edge trading magazine on the other side of the world. Dawn has one of the greatest stock market minds in the world and she is an incredible person. I'd also like to thank Aimee Sargent for giving me my first writing assignment at *YTE* and special mention to Chelsea Reid for following through after Aimee left the magazine to pursue other career opportunities. But it was always Dawn who kept it together.

I'd also like to thank Dickson Yap at *The Trader's Journal* magazine, based in Singapore, for inviting me to write for his magazine and highlighting my work as their lead article in November 2006. Being in that magazine helped give my work an added flair.

Sometimes one has to become recognized as an expert from afar in order to get any recognition at home. After my initial exposure in Australia, it was *Futures* magazine that showed interest in my Lucas work. A special thanks goes out to Dan Collins and Ginger Szala for having enough confidence to publish my work in the September 2006 issue and I've working with them ever since.

My work is only as good as the information and data. Our early charts come courtesy of Prophet charts. Special thanks to Tim Knight, who was a great early help. He also has an excellent blog you should check out at [www.slopeofhope.com](http://www.slopeofhope.com).

We were also helped by Julie Craig at Esignal for the charts in the Forex chapter. Special thanks to Marty Mchale for helping on the original PowerPoint presentations for New Tactics In Technical Analysis as well as encouragement from Dru Johnson who kept me on track through the early process.

Since then I've developed friendships with Genesis Financial Technologies and Glen Larson in particular. He has stuck by me since the original edition came out and quite frankly this book likely doesn't come about without his continuing support. I would also like to thank Danielle Bourbeau and Kevin Riordan now of Capital Trading Group for their support.

Later on, I was introduced by Ross Beck to Market Analyst from Australia. I believe they have the best Gann software in the world. I always appreciate the support of Mathew Verdouw, Matthew Humphries, and Darren Hawkins.

Of course, a special thank you goes out to Jody Costa for adopting the first edition of this book at Marketplace Books. John Probst, John Boyer, and Chris Myers were instrumental in making the first edition not only a reality but a success as well.

This new edition never would have materialized without my clients and readers and I believe I learn as much from them as they do from me.

The biggest thanks of all goes to my family. My father has been supportive all these years. My mother was always encouraging; unfortunately, she passed away years ago. My mother-in-law, Beatrice Heffron, always offered kind words of encouragement. Bea was living in a nursing home and her health took a turn for the worse the same week I signed the original contract. The nurses at the home told us Bea stopped eating and if that didn't change she wouldn't last another week. Immediately we went to the home and shared the news. She lit up and started eating again, which amazed those taking care of her. She was very happy to learn this project would become a reality and committed to hanging on until it was released. She didn't quite make it but hung around long enough to see my name included in the distinguished roster of speakers at the 2007 Traders Library Hall of Fame Awards in Washington, DC. My wife, Jeanne, and my son, Josh, have gone beyond the call of duty, and my wife truly is my better half.

I'd also like to thank Kevin Commins and Meg Freeborn at Wiley for making me feel comfortable as well making this project happen at my new publishing home at Wiley.

I'm very grateful for the numerous miracles in my life. One of which is this new edition which I believe is really God's work. God works in mysterious ways and He provided this opportunity at Wiley. Any success that comes from this endeavor is truly from the grace of God and the Holy Spirit.



# Underlying Structure of Markets

Welcome to twenty-first century technical analysis! In this work we are going to shatter myths, gore sacred cows, and finally build a better mousetrap. For the past several hundred years, technicians have relied heavily on price and volume studies as the most important factors on a price chart. Don't get me wrong, these are very important. However they do not give us a complete picture. Time studies are the least understood, yet are a critically important element in technical analysis. For this new edition we are going to include some of the work of W.D. Gann and his most important discovery. So let me say that, while we are in twenty-first century technical analysis, the roots lie in work done 80 to 100 years ago that was ignored by the majority of the trading community. Even today on the three most important media outlets that give us wall-to-wall coverage of markets, the time element is still ignored.

The first edition of this book was released several months before this pattern completed. As early as April 2007 we had been telling our regular readers at the time that a very important pivot was coming in October, as seen in Figure 1.1. The essence of the book was to teach people how to recognize patterns such as this. Had anyone recognized and understood the significance of this market turn they could have taken appropriate action to protect themselves. We revisit this Dow episode later in the book as well because I told



**FIGURE 1.1** Dow Bull Market 2002 to 2007

people the turn coming in October 2007 could be the most important in that entire decade. I was only partially right. The peak of 2007 turned out to be the most important turn in our generation. It ended a five-year bull market, setting the table for the worst financial crisis since the Great Depression. The timing principles in this book will teach you how to recognize events such as these. One of the most historic was the eye of the storm created by that 262-week high. As we see, the Dow topped on October 11 and 12 in 2007. Exactly 233 trading days later in Figure 1.2, was the Lehman Brothers bankruptcy,



**FIGURE 1.2** Lehman Event

which for all practical purposes was the initial acceleration point to the 2008 crash. As it turned out, the NDX/NASDAQ topped out on October 31, 2007, roughly three weeks later.

Roughly three weeks after that was the TARP vote in Figure 1.3, which was 233 trading days off the NASDAQ top. It may have been the first time in history that a crash materialized at exactly 233 days off one peak and went into overdrive 233 days off the other peak. If this is really the case it's because of the unique properties of the 2007 top. Most people don't know this, but this is the kind of symmetry we are going to teach you how to recognize, along with the opportunities they represent. Also they will help you recognize when an event like this is not materializing. This information was not only valuable to the trading and investing community but the average person who saw his 401(k) decimated as well. If this doesn't prove the validity of precise market timing windows, nothing ever will.

Traders comprehend targets based on price and volume very well. However most people have very little idea of the real reason why a trend changes. Do you ever wonder why a chart will hit a certain price target and linger for days until finally one day it drops? Why did it drop on this day as opposed to that day? This area has always been one of the biggest problems for traders. The first edition made a serious attempt to close that gap. This edition takes it a step further. We start here with the symmetry from the greatest crisis in our lifetime and find the market left clues. Hopefully you will continue with an open mind so you can have a greater understanding of why price action



**FIGURE 1.3** TARP Event

behaves the way it does. It is a wonderful world of possibilities. But there has to be a basis for understanding patterns.

There are different methods of technical analysis. Dating back to the 1920s and 1930s, Richard W. Schabacker wrote several books that were based on Dow theory. He hypothesized successfully that certain patterns that showed up in the major averages were also relevant to individual stocks as well. His brother-in-law Robert D. Edwards continued his work. Many in our generation are familiar with the technical work of Edwards and his partner John Magee (Magee ix-xv). Together, they are considered the fathers of modern technical analysis. As we know, technical analysis is a snapshot of market participants' collective behavior. Since we are dealing with human emotions, these patterns of collective behavior are repeated over and over. They can be recognized and then utilized to anticipate future moves in the markets. These patterns can be further broken down into naturally recurring sets of waves and calculations.

The basic structure of financial markets lies in a catalogue of repeatable patterns uncovered by Ralph Nelson Elliott and refined over the years by other well-known Elliotticians including Robert Prechter Jr. The Wave Principle represents a good pattern-recognition system. These waves are like snowflakes. No two patterns are ever alike, but they all have repeatable tendencies. Inside these waves are universal calculations that are measured in terms of both price and time. These measurements are driven by Fibonacci relationships. Much of the research on the time element is derived from the work of W. D. Gann, who should be considered the founding father of modern time studies. From Gann, modern Fibonacci analysts have done an excellent job of simplifying the methodology so traders can practically use it as an everyday discipline. When you combine Elliott and Gann, you have the capability of taking subjectivity out of Elliott, which is the method's main criticism. But they are rarely used together.

The Elliott methodology relies heavily on the Fibonacci relationships to the point where one really can't use one without the other. Since the Wave Principle relies on Fibonacci calculations it would make sense that those who use Fibonacci retracements would recognize patterns in terms of Elliott Waves. The first edition of this book incorporated the time principle into the Fibonacci/Elliott ways of thinking as well as traditional technical analysis. This edition introduces the concept of price and time squaring, Gann's most important discovery. In this edition we are leaving much of the first edition's Elliott/Fibonacci work here as many of you are more familiar with it, but taking it one step further and introducing enough Gann you can use now.

and it won't take years to figure out. The first edition reintroduced the Lucas series of mathematics. French mathematician Edouard Lucas (1842–1891) discovered this series, which is a derivative of the Fibonacci sequence. Lucas was the guy who gave the Fibonacci sequence its name. It is mentioned briefly in other books. It is here where this series is presented in great detail. The author is certainly not the first to present Lucas to the financial community. However, it has a greater influence on many financial charts in all degrees of trend than many realize, as we will show you, and has been greatly misunderstood and greatly understated. Lucas does not supersede Fibonacci, it complements it. According to the research presented here, you will see how often it does. The purpose of using the time dimension is to gain a very important tool in the pattern-recognition game.

A pilot wouldn't think to ever take off in a plane that was not equipped with instruments that could fly or land it in bad visibility. As challenging as financial markets are, using technical analysis as a pattern-recognition system without the time dimension is like attempting to land a plane in zero visibility.

Before going on instruments we need to navigate in good weather. Basic navigation of financial markets begins with an understanding of the Wave Principle as one underlying structure of all financial markets. The Wave Principle gives the trader a good start at pattern recognition. Those of you trained in the Edwards and Magee school of technical analysis can compare and contrast the two methodologies. This book uses the Wave Principle only as a guide because it is fairly complex and not totally reliable in real time. It's a guide because of the subjectivity of the waves. What we'll cover here in contrast to what is presented in pure orthodox Elliott books is the ability to use the Wave Principle as a GPS. We don't want to totally rely on the waves as iron trading rules for entry and exit.

When we look at the waves we can have an idea of where we are in a trend. We can also have an idea if we are in the main trend or in a move that technically corrects that trend. Sometimes a correction is so large in relation to the main trend that we really don't know if the larger trend has changed. This is one of the black holes in the Wave Principle that this book intends to clear up.

There are two basic patterns of waves. The first are known as impulse waves, which is the prevailing larger-degree trend. The other is known as corrective waves, which move counter to the main trend. Each has their own distinctive set of characteristics. In this chapter I will only cover the basics as a review of materials you may have read elsewhere. Later on, I will

show you how to recognize an impulse or corrective wave by exclusively understanding the number sequences in all of these waves.

## ■ Impulse Waves

Impulse waves have their own unique characteristics. The larger prevailing trend is considered to be an impulse wave and you can recognize them as they move in a five-wave sequence. They can also move in a 9- or 13-wave pattern. There are only three iron laws of impulse waves according to Prechter (30).

1. Wave three is never the shortest wave.
2. Wave two never retraces more than 99 percent of wave one.
3. Wave four does not overlap the territory of wave one.

Let's clear up some of the confusion surrounding these rules. From my experience in dealing with the Elliott community over the past few years, some think the third wave is always the largest wave. This is simply not the case. Generally speaking, the tendency is for wave three to be the largest wave, but the rule is it can't be the shortest wave. If you are counting waves and the middle wave is the smallest, something else is going on. That particular wave might be an extension of the first wave, but it isn't a third wave.

The other controversy surrounds fourth waves. According to some in the Elliott community, they do not allow for any overlap of the first and fourth waves, but I've seen many instances of where the fourth wave touches, grazes, or slightly overlaps wave one. I think you need to apply common sense to the situation. If you have a fourth wave that makes an obvious violation into first-wave territory, it isn't a fourth wave. If you've had a first wave, a retracement second wave, a third that makes a decent advance, and then you have a pull-back that grazes first-wave territory before turning up, I think you can make a case for it being a fourth wave.

Another characteristic of impulse waves is the Rule of Alternation. This is not an iron law but rather a guideline. The Rule of Alternation suggests that if the second wave retracement takes the form of a sharp, the fourth wave is likely to be a flat correction. Other ways this rule manifests itself is when the first wave is the largest wave, the fifth wave will be the smallest. In a larger move, if one set of five waves has the third wave as the extension, the next round will either have the first or fifth wave as the extended wave (Prechter 61).

Extensions are another important characteristic of impulse waves. This means that of waves one, three, or five, one will be considerably larger than the other two. Extensions are hard to count while they are in progress, and the exact count is not readily apparent until late in the move. The time cycles clear up much of the confusion and allow the trader or analyst a better road-map to determine where we are in the bigger scheme of things more easily.

There is a set of common relationships in an impulse sequence that is Fibonacci based. The most common tendency is for the third wave to be the extended wave and many times it will measure 1.618 or 2.618 times the length of wave one as measured from the bottom of wave two (Prechter 125-138). In lower probability cases, the third wave may even measure 4.23 times the length of wave one.

When the third wave is the extended wave, the tendency is for waves one and five to have a 0.618/1.618 relationship to each other. In rare cases, the fifth wave can be a 2.618 extension of wave one. Recently, we had a situation in the XAU where wave five was a 2.618 extension of wave one and wave three was not the shortest wave.

When a fifth wave extends, the most common relationship is it measures 1.618 times the length of waves one through three, with wave one being the smallest wave. When wave one extends, it will usually measure 1.618 times the length of waves three through five, with wave five being the smallest wave.

In rare cases we can have a double extension where waves three and five are both twin 4.23 extensions of the first wave.

The best way to recognize an extended wave is to observe how the progression begins. Once we get a new trend we'll have a first wave up, a retracement, and another leg up. If the second retracement violates into the territory of the very first wave in the sequence, we know by the iron law of fourth waves, that this can't be a fourth wave. It must be the start of an extension or larger move. How do we know that it is not a corrective move? Watch the volume patterns. At all times we will use other indicators to confirm a wave count. If we are in an uptrend, the down days compared to the up days will be lower volume on average. For instance, if we've been through a long down trend where sentiment became unusually negative, the trend going in the new direction will start to build decent volume days and the pullbacks will be of lighter volume. A lighter volume wave that slightly overlaps a first wave up is likely to be corrective, counter to the new trend and part of an extension going in the new direction. The time dimension will also give us a good clue as to the underlying direction and I'll cover that in a later chapter.

## ■ Corrective Waves

Corrective waves have their own unique set of characteristics that differentiate them from impulse waves. A wave is corrective when it moves counter to the trend. There are two types of corrective waves. One family consists of sharp corrections and the other family is considered flat corrections. You may consider triangles to be another subset, but technically they are part of the flat family.

Sharp corrections normally fall into a five-three-five pattern of waves. They are labeled differently from impulse waves and use letters as opposed to numbers. An ABC correction will contain five small waves moving counter to the trend, followed by a small sideways or triangle correction, followed by five more waves. The way to recognize these waves is they violate the overlap rule where the fourth wave falls deep into the territory of the first wave. The best way to recognize a sharp correction is they are distinguished by being very choppy. If you don't understand waves at all and have no real plan to do so, the best way to understand corrective moves is by their choppiness or lack of structure. Corrective waves are also characterized by an average lower volume than the prevailing larger-degree trend moving in the other direction. How do you know you are in a correction? Let's say we are in a bear market and begin a bounce. If the up days are on light volume it's bound to fail. It can be as simple as that.

Sharp corrections retrace either 38 percent, 50 percent, 61 percent, 78 percent, or 88.6 percent. In rare cases they will retrace 23 percent. Several years back a study was done by Rich Swannell, an Australian Elliottian. He took millions of retracements in all degrees of trend and found that 60 percent of second wave retracements fell under the bell curve between the 25 to 70 percent retracement level (34-35). This adds to the complexity, since 40 percent of the time we will have some other retracement such as the 14.6 percent or even the 88.6 percent. How one definitively defines a second wave in an impulse or a B wave in a corrective, I'm not sure.

We derive the 88.6 level because it is the square root of the 0.786 retraction level. However, moves will stop short of a full retest right on the 88.6 percent marker. For most common retraction relationships, the following happens. An impulse move in one direction will occur, and when it comes time to retrace, the first leg will retrace 38 percent counter to the trend. This would be an A wave or the first part of an ABC. A small B wave commences, and finally the C wave kicks in to take the entire retraction to the 50, 61, or 78 percent marker.

For instance, the first move counter to the main trend keeps going and re-traces 61 percent. This is a clue the move might not be corrective. Normally, A waves will not move 61 percent counter to the prevailing trend. Odds are something else is going on. What might that be? First legs that move 61 percent going the other way most often are new trends in the opposite direction, but they could also be 100 percent retests which turn out to be double tops (bottoms).

Flat corrections are also known as complex sideways patterns. Their shape is also the three-wave pattern, but it is considered to be broken down into a smaller subset of three-three-five. They are best recognized as moves where all three legs tend to equality. The A wave will move counter to the prevailing trend and likely to retrace 23 to 38 percent, then the B wave will come all the way back to retest the high (low). The C wave will drop down to the level of support (resistance) of the A wave before the prevailing trend continues.

One of the most dangerous patterns in the entire catalogue is known as an irregular or expanded flat pattern. This pattern is very dangerous because it has a low probability, yet it happens often enough to be a problem. While there hasn't been a statistical study done on expanded flats, I've been told by other expert Elliotticians they confirm about 30 percent of the time. Here's what happens: After an impulse wave in the prevailing direction, an A wave will retrace 38 percent of the move then turn back in the direction of the prevailing trend and make a new price extreme. Let's say we have an uptrend in place. The first leg down will retrace approximately 38 percent then turn back up, thus confusing market participants into thinking the prevailing trend is back in place. There is the obvious retest of the old high and when the old high is taken out, participants are induced to go long. They are wrong, as prices don't carry very far. What happens next is almost criminal. After participants take their long positions, a C wave kicks in going the other way. C waves are always the most violent moves in the entire catalogue. The C wave usually measures 1.618 times larger than the A wave that began the pattern. If for instance the A wave measured 10 points and the B wave up which took out the old price extreme takes out the old high by two to three points, what happens is a C wave will now drop 16 points, taking out the old A-wave low. The players who went long either get stopped out or taken to the cleaners. Finally, by the time the C wave measures 1.618 times the original A wave, new players are convinced this is a new trend moving in the opposite direction. They join in on the short side, but they are wrong. The correction is over as prices fail to drop another point. This time it is the

bears who are taken to the cleaners as the correct side of the market is once again the prevailing trend prior to the A wave.

The problem with trading this sort of pattern is you can suspect it, but they only work out about 30 percent of the time. Unfortunately, the only time we can really recognize an expanded flat is when they are complete and in the rearview mirror. Sorry, this isn't a game for children. The good news is we can smoke out these patterns more readily by adopting the methodologies uncovered in this book.

## ■ Triangles

Triangles appear in the fourth wave of impulse moves and B waves in corrective moves. The implication of triangles is they are the next to last move in a pattern. What makes a triangle so complex as part of a fourth wave is that, by nature, fourth waves are difficult to count. Consider a third wave that is usually the most powerful move in an entire pattern. The third wave generally includes the point of recognition where all participants realize the trend is up. Casual participants such as the general public begin to get interested.

At some point in time, the third wave comes to an end and sentiment becomes one of surprising disappointment. Professionals begin to take profits as they sell to latecomers. However, there are still enough buyers to keep the trend alive. A triangle mostly signifies a tug of war for dominance between bulls and bears. As fourth waves are difficult to count, we don't realize we are in a triangle until at least half the pattern is already developed. Let's say we are in a bull market. As wave three ends and there is a drop, participants erroneously assume a new bear market. The first wave down ends prematurely and participants erroneously think it is an automatic continuation of the prevailing bull trend. However, there will still be another drop and those participants who are less convinced drop off. Overall the battle between bulls and bears continues until the triangle completes.

The two most common types of triangles are contracting and expanding. There are a few important guidelines in identifying a valid triangle. In contracting triangles, the five-wave sequence will have at least two waves going in the same direction that have a 1.618/0.618 relationship to each other. That means that either A and C or D and E will have that Fibonacci interwave relationship. The tendency for expanding triangles works the same way, except the waves get bigger as the pattern progresses.

The mistake most Elliotticians make is confusing the triangle with the complex sideways or expanded flat pattern. What happens is the alleged triangle develops most of the way, but blows up near the end. Here are some guidelines to prevent that from happening:

1. Realize the triangle is the next to last move in a pattern. Chances are small you'll see a triangle confirm early in a trend.
2. Always look for those Fibonacci interwave relationships discussed above. If you don't have those relationships, the odds are the triangle is not going to confirm.
3. A triangle has to have the look of a triangle. Elliott as well as Prechter state the most important aspect of any wave count is that the pattern has to have the right look.
4. This one is original to this work. The time bars usually confirm the pattern. This is not an iron rule but rather a strong guideline. Most triangles will finish in the right number of Fibonacci or Lucas time bars.

I have found that triangles will complete in 47, 55, 76, 78, or 89 bars on one of the intraday time frames. As you can see this is a mixture of Lucas and Fibonacci. The time frames followed here are 1, 5, 15, 60 min, and then daily, weekly, monthly, yearly.

Some contracting triangles contain a concept called *Thrust Measurement*. In certain instances when the triangle appears in the fourth-wave position we can measure a perpendicular line from where the A wave begins down to a trend line extended into space as a potential target for the completion of the fifth wave. There are examples of this later in the book but let's say the width of the triangle from the origin to a line drawn perpendicular straight down measures 15 points. Let's say the third wave ends with XYZ stock at 60 and the A wave bottoms at 52 and the triangle finally completes at E wave 55. The mistake many Elliotticians make is to assume the thrust measurement would be the length of the A wave, which is eight points. However, when we back up the lower trend line to the point in time where the A wave started, we find the trend line extends back into space to a point on the chart near 45. Seeing the triangle completed at 55 we can then project a final fifth wave target at 70.

## ■ Diagonal Triangles

Diagonal triangles are considered to be impulse waves and are the only waves that allow overlap between the first and fourth waves. I think the reason diagonal triangles are considered to be part of the impulse wave family is you

see them so often as fifth waves as part of the larger overall trend. Also, they would not be considered as corrective waves because they are so often the final wave of a pattern. Since there is much overlap they are confused with corrective waves. Eventually, the third wave will sprout above resistance, but as the move gets higher you can determine a wedge shape with converging trend channel lines. The other reason they are confused with corrective waves is each leg is a three-wave pattern and has the look of an A wave.

Most diagonal triangles appear in the ending position but in rare situations they can be seen in the leading first or A-wave position. The difference between the two is the ending pattern is three-three-three-three-three and the leading wedge takes on the shape of a five-three-five-three-five. In the leading position, the wedge pattern has good volume, while in the ending position volume is waning which is indicative of the end of a move.

## ■ Sentiment

Each particular wave has its own range of emotions. Once a new trend starts, the crowd has been conditioned by the old trend. At the end of a bear market, psychology is such that the masses have been beaten down for years. For those of you who go back to the 1970s, sentiment was so bad that the major brokerage houses were laying off a good percentage of their sales staffs. This is normal behavior in a recession, but in this case reached the point where they were even discouraging newcomers from entering the field. People were so down on stocks that even economists and other industry experts had little hope they would ever take off again. By the end of a bear market, most participants are convinced price action is a bottomless pit that will go on forever. That is how you can recognize a true bottom. Tops are at the other extreme. Recall that by March 2000 everyone was convinced the NASDAQ was going to the moon.

A new bull market starts and is met by doubt and disbelief. Participants are of the opinion the new move up is just a correction, and the larger degree trend will return to set another new price low extreme simply because the prevailing trend has already done so for years (or whatever degree of trend we are considering). Let's go back to the old bull market that ended in 2007 and go through a progression of how each wave did its job. As we know, the old bull market was fueled by a real estate and lending bubble. It's beyond the scope of this book to preach the morality of what happened, but we all know people bought houses they couldn't afford and regulators

allowed it to happen. It was the ultimate smoke and mirrors rally. We can all agree that euphoria ran rampant. Here in Phoenix where I live, in July 2007 real estate agents started seeing the pace of the deals coming in slow down at first, but ultimately come to a grinding halt. The market peaked in October and by that time everyone realized the housing industry was experiencing a slowdown. The topping process that the Elliott community calls the fifth wave did its job with the euphoria and complacency. The prevailing sentiment of the day was the media anticipating a soft landing for the economy. In the first wave of new bear markets it's hard, if not impossible, for market participants to project massive change, not only in the stock market but the economy as well. With such optimistic projections, anyone who steps outside of the box is viewed as insane to buck the crowd. This is why the early phase of a new bear market is met with denial and complacency. By 2008 it became fairly obvious there was going to be no soft landing. Different media outlets released reports that suggested there were to be hundreds of thousands of mortgages that needed to be reset by late 2008. What they meant by that was that the interest-only loans that carried balloon payments needed to be refinanced or they'd blow up. At the same time, Fed Chairman Ben Bernanke told the public that the subprime mess would be contained. This sentiment is representative of early-stage bear markets. This could be the first wave or early third wave.

By the summer of 2008, Mr. Bernanke was invited to speak to the Senate banking committee, where members finally held his feet to the fire. Not only was the subprime mess not contained, but also the economy seemed to be getting worse. This was the point of recognition. At that the SEC placed a ban on naked short selling and for a period of time they banned short sales of banking stocks. Eight weeks later Lehman Brothers collapsed, as did AIG, and the real crisis was on. Over the year, complacency turned into concern, which became panic. Panic became serious fear that the financial system would fail and by the time it ended, the feeling was that the market was going down forever and could never turn up. That was March 6, 2009, and became known as the *Haines Bottom* because the late Mark Haines called the bottom to the day.

By the time historical financial institutions failed, the bear waves had done their job. Bear markets won't end until there is blood in the streets. In terms of Elliott/market sentiment, what is the difference between the third and fifth wave bottom? We are generalizing by categorizing by Elliott standards, but the difference between a late-stage bear and the end is that in any bear, fear levels rise and can keep going for a period of time. However, there

always is a day where fear rises to the point where it feels like the market is going to drop forever and there is no chance of a turn. When that happens, markets are usually at fifth-wave bottoms.

So we've come full circle. We've come from a place of extreme euphoria at the old fifth-wave high of the bull to that end-of-the-world feel at the fifth-wave bottom of the bear.

But what about that new bull market we discussed a few paragraphs back? Yes, it is met by doubt and disbelief. Our generation, which knew only of Internet and real estate bubbles, now bore the scars of a financial system that nearly went off the cliff. Years ago Prechter stated that for the generational bull market to end, people would have to give up their seemingly insatiable appetite for stocks. I always wondered how that could possibly happen. Enter Bernie Madoff. In the latter stages of the bear market, it took the former head of the NASDAQ implementing the biggest Ponzi scheme in the history of Wall Street to bring the place to its knees. In February 2009 I spoke at the New York Traders Expo and one day had lunch at an upscale deli in midtown Manhattan. I was sitting at the counter and they had CNBC playing in the background. As luck would have it, just at that time the Dow was breaking below its Internet bear market low from 2002. For a technician this was a fairly important event. There were two well-dressed businessmen sitting next to me and when I brought the Dow event of breaking below the old low each looked at me and said, "Why do you care? We are not interested in the stock market anymore!" There it was. I was in midtown Manhattan and an island that used to be stock market crazed had finally lost interest. These people were now scarred by the experiences of the financial crisis.

Life goes on and the market did recover. But now nobody talked about soft landings anymore. Day after day the market climbed. Day after day, guests on the business channels were asked if they thought there would be a double-dip recession. This is a classic wall of worry. Thoughts of soft landings were replaced by worries about new recessions. From this complete cycle you can get an idea of where we are in the wave structure based on the prevailing psychology or sentiment.

A first wave also means lots of short covering, as there isn't real buying. There's too much fear. All the bottom turn did was bring relief. Ultimately we get a retracement that has a technical purpose of testing the low. That does not mean it has to go all the way to the exact bottom. The sentiment of second-wave retracements is "Here we go again." You can recognize second- or B-wave retracements by their re-creation of the mood in the final wave of the old trend (Prechter). People do believe that a retest of the bottom is going to

break through. But how can we tell the difference between a move off a bottom and just a bear market rally leg? Participants in a bear market rally believe we are in the early stages of a new bull market. In the early phases of a new bull market, as we just saw, almost nobody believes it is a bull market.

Okay, we've had our retest or technical retracement and participants come to discover the sky isn't falling. When all of the technical requirements for a second or B wave are met in terms of price and time, there is only one way for prices to go and that is to a new extreme in the new direction. In third waves, once we get near resistance or first-wave high sentiment indicators are still mostly negative, as participants believe we are very close to a market top. The truth is we are still much closer to the bottom than we are to the top. In the last great bull market of the 1980s, during much of the early 1980s up to late 1985, participants were convinced we were near a top. It's hard to imagine today, but when the Dow was between 1000 and 2000, people thought that was the ceiling. Since sentiment is negative, the implication is there is plenty of money on the sidelines that hasn't been put to work.

Where does this money come from? Realize that in the early stages of new bull markets the economy has bottomed and confidence starts to come back. There are generally two phases to a new secular market. While lots of people believe the bull market started in 1982, the real bottom was in January 1975, which was before stagflation, Jimmy Carter, 20 percent interest rates, or the Iranian hostage crisis. A new bull market was here, but nobody realized it. After a long period of time without a new market low, prosperity slowly comes back. Bull markets are characterized by a new set of companies with new technologies. As time goes by, people start becoming optimistic about their future prospects and they start investing their earnings. At some point, momentum kicks in and more people finally realize the trend has indeed finally turned. This is usually at the midpoint of third waves and is considered to be the *point of recognition*.

As we know, third waves will extend in some Fibonacci relationship to the first wave. Market conditions, economic factors, demographics, and technology will determine the size and scope of the cycle. A third wave usually extends to 1.618, 2.618, 4.23, or 6.83 times the length of the first wave. In certain instances, the third wave can even be a double 4.23 extension. How else can Dow 2000 in the early 1980s turn into Dow 7000 to 11000 by 1998 to 2000?

By the time we are beyond the point of recognition the easy money crowd starts to get involved. People who have no interest or knowledge of

the markets get interested. When cab drivers make money in stocks, we are getting late in the move. When everyone at the cocktail parties talks about the stock market, it's getting late. By now, sentiment indicators have turned positive and reach bullish extremes. When certain price and time targets are met, the third wave ends. We saw this in 1999 and again in 2006 and 2007.

The prevailing sentiment of fourth waves as discussed previously is one of surprising disappointment (Prechter). Fourth-wave consolidations are very complex. According to Bill Williams, another well-known Elliottician, if you wake up in the morning and have no clue about the wave count, odds are it is a fourth wave. Fourth waves are characterized by many cross currents. There are those who are convinced the bull market is over. Others are attempting to buy the dip. In the end, the pullback is of a lower volume than the third wave up and lacks the conviction of a new trend going the other way. At some point, selling pressure dries up and the fifth wave kicks in.

Fifth waves are characterized as being weaker technically than the third wave, yet sentiment goes to new extremes. Not only are the cab drivers becoming day traders, but even grandmothers are pulling the trigger. Many are total novices involved for the first time. Technically it is a pattern where all divergences develop. The first one is the advance/decline market internals are not as strong as the third wave. Fewer and fewer stocks are participating in the move. There is a divergence as the move powers on, but with lighter volume. During earnings season, stocks are already priced to perfection and if they don't meet inflated expectations they are generally taken out to the woodshed. However, since it's still the fifth wave, prices tend to recover but not with the power and conviction seen in the third wave.

As the market powers even higher despite bearish divergences, weaker volume, or market internals, this convinces everyone that prices will keep going higher. Why? Because the mood becomes a self-fulfilling prophecy. By the end of a fifth wave, proof of the trend is seen as, despite the early signs of trouble, the market keeps going. We get a few lone voices of reason suggesting that trouble lies ahead. In 2007 such voices were Douglas Kass and Peter Schiff. But they are generally ignored and looked upon as foolish. At or beyond the top, anyone who views a market pullback as anything more than an economic soft landing certainly has their sanity questioned. Finally, participants are convinced that prices can only go one way. A day will come where the talking heads on television will announce that nothing is standing in the way of the markets powering even higher. It feels like the market can and will go up forever. That is when the move is likely over. At bear market bottoms, it is just the opposite. People see the market as a bottomless pit.

At market tops, everyone is finally convinced prices are going to the moon. This is where it ends. The waves have done their job.

## ■ My Experience with Elliott

There is no doubt that Elliott Waves provide a universal structure to all free financial markets. It is an excellent pattern-recognition system. Those in academia who have been telling us for the past 60 years that prices are random are all wet. If you get nothing else from this book, you'll realize that Random Walk theory is totally obsolete. According to Burton Malkiel, future steps or market directions can't be predicted on the basis of past actions (24). Those who tell you it's impossible to time financial markets just don't have the skills required to do it. The Elliotticians of the twentieth century, from Elliott himself all the way to Prechter, have laid a firm foundation of understanding how financial markets work. The Wave Principle was the first really popular line of defense against Random Walk theory, but I believe it's best used as a guide as opposed to a pure trading strategy.

Since trading requires quick action, there is so much subjectivity in the interpretations of the waves. Strict Elliott interpretation contains wave notation in degrees of trend that range from Grand Supercycle all the way down to micro waves on a one-minute chart or even smaller on a tick chart. You can spend so much time trying to figure out if you are in wave one of wave two or is it still wave five of one. The academics of the Wave Principle also get caught up with proper notation with letters, numbers, Roman numerals, and Roman numerals with parenthesis. I found this to be entirely unnecessary and believe it is more important to take the spirit of what the leg might be telling you as opposed to a strict notation. If you are a person that can really come up with a strict count and be correct, more power to you. By being correct I don't mean just an academic interpretation, but being able to pull the trigger and actually make money out of such an interpretation. However few people are really able to pull it off. So it's a great methodology when combined with other good pattern-recognition methods.

I'm here to tell you that the most important thing you can do with Elliott is apply common sense to the situation. The best application of Elliott in real time is as a guide. You don't need certainty in wave counts. You do need to have an idea where you are, however. It's important to know if you are in a first, third, or fifth wave. It is important to understand the difference between impulse and corrective trends. If you get the major part right you can

be wrong about the exact wave count, but if you are still on the right side of the market you will come out ahead.

Put any number of Elliotticians in the same room, and you are liable to get that many different interpretations of the count. The leaders of the wave community have done a fine job of laying the foundation and setting the table for the next development in this field. What they've done is tell us textbook waves move in impulse fives and corrective threes. They haven't cured the subjectivity in an extreme market. In a fast market, the intraday third wave often extends far beyond what is normally expected. Let's take this NQ intraday leg as an example.

Here's a leg in Figure 1.4 that has an initial leg off the low of 6.75 points. If we are properly annotating this move, we might call it a third wave and we might call it an ABC, but the bottom line is the big wave is 25.50 points. Simple math shows us that  $25.50 \text{ points} / 6.75 \text{ points} = 3.77$ . That's wonderful as it's another way of having Fibonacci work for you, but we've been taught the most popular Fibonacci extensions in an Elliott Wave are 1.618 and 2.618. What happens when we have to think outside the box? Traders are not prepared for this and likely miss the message this chart is telling us. A chart like this only adds to the subjectivity of Elliott, not diminishes it. Or how about this one.

Here's a crash on an intraday NQ in Figure 1.5. The first leg off the high was 7.25 points. One of the lower-probability Fibonacci extensions



**FIGURE 1.4** Fibonacci 3.77 Extension



**FIGURE 1.5 NQ Intraday Crash**

we've learned is a 6.84 extension. This chart shows you that  $7.25 \times 6.84$  is 49.59 and what actually happened. We had a drop of 49.50, which is close enough. We end up with that 6.84 extension, but in a fast moving market how many traders actually have the capability of figuring it out in time to react to it properly? But in the Elliott debate, if you were looking for one of the smaller traditional extension levels, a chart like this only adds to the subjectivity debate.

If the subjectivity didn't increase there wouldn't be such debate. To use a sports analogy, if the Mets won the game 4-3, there is no argument. We can analyze the game from a standpoint of strategy, offense, and pitching but all that really matters is the facts. Scoreboard, S-C-O-R-E-B-O-A-R-D. You can never dispute the final score of a game. When you look at an RSI reading of 70, it's 70. There is no debate. When we look at an engulfing candlestick pattern, it is what it is. But if we can't agree on a wave count we have a problem.

The methodology in this book goes a very long way in bridging that gap. What is presented here in the following chapters will take your understanding not only of Elliott but pattern recognition to new levels of precision. The great W.D. Gann began this work nearly 80 years ago, but for most of the twentieth century, at least in the United States, has been brushed under the rug.

What I will do with the rest of this book is introduce the time element on the technical analysis chart and work to incorporate it into existing

methodologies you already use. We will build on it slowly from one chapter to the next. They don't include Lucas to the degree done here. What I do here is attempt to simplify it in such a way to make it the practical extension of technical analysis that it really is.

The first printing of this book limited the scope to Elliott, Fibonacci, and touched slightly on Gann's work. Since that time I noticed that many of the time windows discussed didn't validate for whatever reason. Many did, and if you read the first edition you would have been able to identify the October 2007 top which was the end of the bull market. You didn't need to be a regular trader to get the value from the first edition. All you needed to realize was the top came in the 261-week window to the Internet bear market bottom. If you knew that, you could have protected your 401(k) investment. The first edition has that contribution to the field of market timing and technical analysis. But since that time I wanted to figure out how we could improve on the methodology. How we close the gap of probability and understand why time windows fire off and how we can anticipate what a particular turn might give us. In the five years since the original version, I've closed that gap quite a bit. This edition will present that research and be of greater value to you. There are a variety of tests I use which help our understanding of pivots.

Gann started this work that for the most part has not caught on with the masses because it is very complicated and takes too many years to learn. I'm not going to hit you over the head with Gann wheels or angles. My job is to take something very complex and present it in a practical way that won't take years to learn. My job is to take the complex and make it simple. Mind you, don't confuse simple with easy. This takes work but I believe it is very rewarding and well worth the effort. No matter how well this works, if it doesn't become fun, you won't adopt it as part of your game plan. We are going to introduce some of Gann's most important discoveries, which will help the individual trader stay on the right side of the market. If you are a hedge fund manager, it might just save you hundreds of millions of dollars.

By the time you are finished with this book your understanding of Elliott will be greater than it is now. You will be able to eliminate much of the subjectivity of Elliott and confirm patterns based on the time element of the charts. You will be able to recognize tops and bottoms as well as the many smaller turns in the markets. You will be able to look at a chart and determine the direction more easily than ever before. You will be able to combine this methodology with other popular indicators and use them with greater effectiveness. I will show you how to make Gann workable without investing 10 years of your life. We will incorporate it all together into a total toolbox

of methodologies you can use to help navigate any market condition and as we all know, markets are more challenging now than they've ever been.

Throughout the course of the book I introduce other methodologies as well. I rely very heavily on candlesticks. There are many good books on candlesticks and I recommend all of the Nison materials. I also incorporate moving averages as those who utilize volume studies or trend following systems use them. My own evolution went from exponential to simple averages and you will see them used interchangeably on shorter time frames. There is very little difference in the results whether you use an exponential or simple average on the smaller averages, but there is a big difference when you get up to a 200-period moving average. Because many of the Gann examples are taken from our newsletters, which use the Andrews pitchfork/median line methodology, we also have a crash course to help bring you up to speed. I like Andrews as a method for helping to identify a trend. However, when combined with the square of 9 work, it produces a high probability trading strategy.

Since the first edition, I no longer rely on lagging indicators. But like anything else, they may be tough to give up. The original book was inspired by traders who doubted the rally in the middle of the last decade. They saw a moving average convergence/divergence (MACD) at extreme and wanted to sell even though the market was still showing signs of wanting to go higher. The takeaway from the first edition was to realize an indicator can stay extreme for a long period of time, until the time windows fired off. For those of you who still use those indicators, it's an important lesson. But it's also my wish in this edition that you learn some of the more advanced calculations and symmetries so that you no longer need to be dependent on such indicators. I suggest that after you learn some of the more advanced techniques you look at your charts with and without lagging indicators until you can wean yourself off them.

Most importantly, you will have a practical, high-precision pattern-recognition system you will be able to use to trade and make money consistently. How much money? That is entirely up to you. This depends on your dedication. This book isn't about money. Technical books by Edwards and Magee as well as others are not specifically about making money. However, what they do is give you high-probability tendencies that work. This book is the same. It's about process. My take is if you keep your mind off the prize you will get it. I know the ultimate goal is to make consistent profits. You can only do that by doing the fundamentals correctly. In professional sports the goal is to win the championship. But how much time do they really spend on

talking about winning the championship? Not much! But they do spend a lot of time talking about developing championship-type work habits. They talk about fundamentals, mechanics, attitude, and practice. Mostly practice and then more practice. Why do they practice so much? It all leads to the final step, which is execution. They practice and train so hard for the moment that doing the right thing becomes second nature. Tiger Woods makes that difficult shot because he practiced it thousands of times, visualized it probably a thousand more. By the time he has to execute, his impulses take over. But did you ever stop and think why Tiger Woods, Michael Jordan, or Kobe Bryant are able to do what they do? It's a process called neuroplasticity. Brain experts like Dr. Joe Dispenza have figured out (*Evolve Your Brain*) that the brain forms new neuropaths in roughly 21 to 24 days. Want to know why it takes three weeks to form a new habit? It's the neuroplasticity. The idea is that when you learn a new skill, the brain grows a road of recognition that makes it easier to identify in the future. Athletes have such good hand-to-eye coordination because of the pathways developed in the brain. Trading is the same way. You train your brain to recognize certain patterns as setups and link them to opportunity. Whatever method is being used, it's a matter of pattern recognition. The challenge in trading is to recognize a moving target. In a book you'll see a setup, but in real time you have to recognize that pattern on the basis of a bullish or bearish day, a sideways or sleeping market, or a market that is both bullish and bearish. It takes a while to develop enough plasticity so you can differentiate that some days you ought to buy the dip yet others sell the rally. It all comes down to discerning differences. This is why it takes traders years to master the profession. First of all you need good data, because this really is a case of garbage in and garbage out. If you are feeding yourself with the right kind of information, sooner or later you will master pattern recognition. But if you spend your whole career looking west for a sunrise it's never going to happen for you no matter how much you study.

Getting back to athletes like Woods or Kobe Bryant they know what to do and because the plasticity leads to confidence it will happen. Some of you will take this material, incorporate it into your game plan, and make it your own. Others will read it passively and marvel at market precision and do nothing with it. It is entirely up to you. Rest assured that, by the end, I will give you strategies you can use immediately in your trading.

When it comes to pattern recognition, keep in mind that no two patterns are alike. The time dimension is like snowflakes. But tendencies do repeat. Your job in this joint venture of ours is learning the tendencies. When you

learn the tendencies, you will come to recognize patterns that will help you make money. I've uncovered characteristics that repeat over and over. Many of you are not even aware they exist. The purpose of this book is to shed the light of day on it. I'll give you the tools. I'll give you the car, but it's still up to you to turn the ignition. You will still need to pull the trigger.

So what is the best way to do this? It's a very controversial subject within the trading community, but I think the best way to learn is on a simulator. That's not the same as paper trading. Nowadays many brokers offer simulators that allow you to trade real market conditions without the using the money. Of course the argument against it is that no money is at stake. That's true, but professional athletes practice a game plan all week and nothing is on the line. Coaches always comment about how well or poorly their team practiced that week leading up to the game.

This is a business that is truly about the process. If you are going to be complacent about a simulator then I agree, it won't be of any use to you. But let's say you are practicing buying the dip after an ABC down. You can practice it on a daily chart, hourly, chart or a five-minute chart. That potential dip can end on the most bearish of days or it can end on a neutral day. It could end after a weeklong pullback on Friday morning after the unemployment report or in the last hour of trade Thursday evening on a surprise reversal. As a trader you must be ready for all conditions. How do you manage to do that without blowing an additional bankroll? I believe the only way to do it is by using a simulator.

It's one thing to trade a pattern, it's quite another to recognize that pattern under a variety of conditions, make the necessary adjustments, and have the discernment to know when to pull the trigger and when to sit back. In terms of Elliott, some patterns are going to extend to a 1.618 and others to a 2.618 as you'll see. The idea is to develop some discernment and not short a move just because of a calculation. What you want to do is make these calculations your tool and not be a slave to them. Understanding market sentiment and psychology goes a long way in helping your ability to discern the difference.

So at the end of the day, what we are doing here is taking the trader from where many started. That is by use of indicators that come on just about every software package. We are talking about oscillating indicators, which are guides at best, and we combine them with the timing windows like we did in the first edition. You can do well with that because you won't be relying on lagging indicators anymore. But as I said earlier, what I found since the first edition was completed is there was still too much of a gap because not all

Fibonacci windows would validate. Not only that, some would validate and not last very long. I wanted to know why and set out on a journey to figure it out. My research led to Gann and was able to greatly close the gap. That work is presented here. But as I instituted the work of Gann and uncovered some incredible market symmetry I found I no longer needed to use oscillating indicators anymore. It became a matter of pure pattern recognition. So this new edition goes beyond lagging indicators into this new/old frontier.

We no longer need to combine Elliott counts with the lagging indicators. If you like you can now combine Elliott Waves with Gann work or just do the Gann work. But once again understand this is a process of developing plasticity. You won't do this overnight. You should make a study by using your old methods side by side with the new. Over time you will develop the ability to trust the new and leave the old behind.

What you'll also develop is the ability to discern when a specific time window isn't going to validate. For instance, readers of the first edition know we relied heavily on a 161 window. Many times it will validate. But there are lots of times when it won't. The reason it doesn't is because it's not supported by a time and price symmetry. So you study to see if there is a good symmetry or square of 9 reading. If there is and the market validates with a reversal bar, great!

If we come to the 161 window and it starts to turn but fails, you run your calculations and find there aren't good readings at that turn, it will give you the conviction to ignore the time window. In a pure timing sense, I believe this is the biggest difference between the first and this new edition. On the other hand, if we have great calculations on the 161 window and it fails anyway, that means there is a strong underlying structure to the prevailing trend and it should continue for many bars. Great calculations are going to repel most tests and challenges. But if they are taken out, it's different than if a resistance or support area is taken out with nonexistent to mediocre readings.

If the market comes to the 161 window and doesn't even stop, don't worry about it. What the first edition did was take the person who used lagging indicators and taught him how to combine the time principle. This book teaches you how to wean yourself off lagging indicators altogether and go to a new advanced level completely by starting with the timing element and squaring it with price. By the end of this book you'll be able to effectively combine the high-probability points on the chart the smart money is looking at (support and resistance) and develop your conviction about any move based on the underlying structure of the market based on the symmetries and calculations you will learn.

# Elliott Waves

Now that we've covered the basic Elliott Wave structure, it's time to take this methodology to a whole new level. What this chapter is designed to do is show you how to work with wave counts based on the time dimension. We know that Elliott is very subjective. The best part of working with these time relationships is they are easier to recognize than counting the waves. Wave counts are difficult pattern-recognition systems because wave counts continue to evolve over a period of time. When we keep track of the time element, we follow repeatable tendencies that are simple to recognize if you know what to look for. In this chapter I'll teach you how to confirm a wave count using the time bars.

Put up a count of the Dow from 2002 to 2006 and you are liable to get as many different variations as there are Elliotticians in the room. As we know, the count has been so complex we may not even be able to get a good count. The academic community may enjoy this exercise, but how can you make money with that sort of information?

The simple answer is, you can't. What's more important, it really doesn't matter. As discussed in the prior chapter, we know there are certain rules we must follow for the structure of markets. We aren't following those rules so we can get an A on a college final exam. We follow the rules so we have an idea what a market can do from any point in time. If we don't have a strong foundation of discipline, there is very little chance we are ever going to be able to develop a conviction of what comes next. As we know, the most important emotional component a trader/investor possesses is conviction or confidence in his game plan. If you don't know

what you are doing, you are flying by the seat of your pants and the chances for success are virtually zero.

Before we start with the charts we are going to go over a few rules and guidelines. There is a debate as to whether it is more prudent to use trading days or calendar days. As you will see, there are numerous examples utilizing intraday data. As such, the goal was to streamline the data. The time principle is universal, so I've stuck to what is on the chart. The information presented here is exclusively in trading bars no matter what the time frame. When we get to daily time frames, keep in mind that calendar days will work a certain percentage of the time. However, calendar days require another set of calculations. Both data sets work concurrently, but you will learn this methodology more easily if we stick to one set of data. It is my observation that trading bars are more precise, so that's what we stick with here. After you get the hang of it, experiment on your own with calendar days and you will see what I mean.

Rule 1—All time relationships are (+/-1) unit.

Rule 2—The more time relationships that line up or cluster at a single point, the greater probability of a reversal or breakout.

Rule 3—The more time and price relationships that line up or cluster at a single point, the greater probability of a reversal or breakout. However, if the support or resistance level created by this cluster is broken, it will only be broken by a very powerful leg. As we progress in the book, you will see the most powerful tops and bottoms occur on a cluster of both price and time.

Rule 3 may seem like a contradiction. However, we are working with Chaos theory. This is not the tooth fairy. Markets can and will do whatever they want whenever they want. What we are doing here is identifying high-probability tendencies with a profit motive. Nothing works 100 percent of the time. As you will see in the progression of charts, these clusters are very reliable. However, they will give way to stronger moves in all degrees of trend from time to time. When they do, the result is likely to continue much further along. For instance, the May 2006 high in the major averages was created on a very strong time cluster. The result was a very strong correction. However, the high in the Dow had been smashed by nearly 1000 points and over 100 points in the S&P 500.

The pattern-recognition game is one of tendencies and probabilities. As such, we need to be flexible. To be flexible we can't be as concerned about

rules as we are about guidelines. You should be aware of certain guidelines as they apply to Fibonacci and Lucas time principles.

Guide 1—Most reversals or breakouts occur on an important time bar. If we are not at a significant time bar, the trend is likely to continue. This is how we come to recognize false breakouts.

Guide 2—Most corrective patterns such as triangles or complex flats will terminate or confirm on a specific time bar.

Guide 3—Not only will a pattern complete on a high-to-low (low-to-high) time progression, but it will also complete on a high-to-high or low-to-low progression.

Guide 4—A move is likely to commence on an important time bar that is not the ultimate top or bottom. For instance, we may top on a 55-bar sequence, go sideways, and retest that high. What will happen is the retest may fall short by even one tick of the top, but ultimately turn down on a 61 bar.

## ■ Actual Wave Patterns

At the end of the chapter I will list all of the observed number bars where a trend is likely to change direction. These would not be considered rules as much as tendencies.

Figure 2.1 illustrates a five-wave impulse pattern in Motorola. The first thing to pay attention to is the look. Elliott and others stressed over and over a pattern has to have the correct look. We do have a textbook five-wave sequence where three is not the smallest wave and four doesn't overlap the price territory of wave one. Those are your basics. Now let's look at all of the relationships inside of this pattern.

First thing to note is how the first wave tops in 38 hours. Thirty-eight is important because as you know 38.2 is an important Fibonacci retracement level. It is an important retracement level because it is the square root of 0.618. When we are dealing with time cycles, any Fibonacci or Lucas relationship is fair game for a turn in whatever degree of trend we happen to be observing. We followed up the 38-hour wave with an 11-hour correction. Not only is 11 a Lucas number, but when we divide 11 by 38 we get 28.9 percent. What that means in terms of time is we had a Lucas 29 percent time retracement.

From that low the third wave came close to a common 1.618 extension of the first wave. It's not perfect but the time relationship sheds more light



**FIGURE 2.1 Five-Wave Impulse**

on why the third wave ended where it did. Going back to the first wave we know we topped on hour 38 and bottomed for the second wave on hour 48. The third wave topped on hour 147, which is a 99-hour wave. When we divide the time relationship between the first and third waves, 99 divided by 38, we get a calculation of 2.605 or just a hair off a common 2.618 Fibonacci relationship.

What we have in this case is a time/price cluster of nearly a perfect 1.618 price relationship along with a 2.618 time relationship.

The fourth wave completed on the one hundred sixty-first hour of the move. What usually happens in small-degree corrective waves is they will either end on an important number like 161, the correction itself will end on the correct number of bars or a cluster of the two. In this case the move ends on the fourteenth hourly bar, which is a derivative of a 14.6 percent retracement level. In terms of time, the number 14 occurs less often in significant turns. The fifth wave lasts 45 hours and ends on the two hundred and sixth hourly bar. There are no perfect common relationships in this case, but if we were to scale up to the daily time frame we would see the whole move completed in 29 daily Lucas bars.

The lesson from this example is that in real time we don't get perfect common Fibonacci relationships in our waves. We need a way to x-ray the waves to understand what is going on underneath the surface. While we do have the proper look of a five-wave sequence, we can get lost looking for common textbook Fibonacci relationships. As we can see when we examine the time relationships, this sequence is loaded with good time relationships. They serve as our compass to understand the waves no matter what the wave count is telling us.

Our next example, in Figure 2.2, shows a common ABC sharp correction in Google. Figures 2.2 and 2.3 exhibit a common ABC sharp correction, first in the context of a much larger move to the upside from November 2005 until January 2006. Figure 2.3 shows the closeup and internal time count of the move.

Observe in this pattern in Figure 2.3 there is first an A wave down, followed by a B wave triangle, and finally a shorter C wave down. In terms of price, the C wave is 0.618 times the size of the A wave. The shorter C wave in terms of price is common in strong moves either to the upside or downside. Also, it is interesting to note how the A wave is five hours in duration



**FIGURE 2.2** Google ABC Correction



**FIGURE 2.3** Google Closeup

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while the C wave is eight hours in duration which is also the 0.62/1.62 relationship we look for. In terms of time, the C wave may have been the longer wave, but it was only able to take prices down 0.618 times the length of wave A. This works on the market the same way as volume does. What I mean by that is during a pullback we will see selling volume dry up, which enables the larger-degree move to continue. In this case, the leg may have continued down for an extended period of time but the selling pressure wasn't there.

The wave ended near a small-degree 61 percent retracement level but perhaps more importantly concluded in 56 (Fibonacci +1) hours.

The internal count of the triangle is somewhat complex, but completes in close to 45 hours. Including shared bars there are a total of 56 bars and the A+C waves make up 13 of those hours. When we divide 13 by 45 we get 0.288889, or very close to Lucas 29. Don't get wrapped up in these complex calculations because when you want to pull the trigger on a trade, you shouldn't do too much thinking. I only illustrate this because all triangles will have some important time calculation whether it is obvious or

not. However, there are smaller high-to-high cycles inside of this triangle that are more obvious, such as from the A wave high at 437 we get three seven-hour high-to-high cycles in a row. Also, from the larger A wave low at 420, count 29 bars and you will see the big black candle at 432 which began the final descent to 414. What is most important here and will be covered in the chapter on candles is the pattern-recognition aspect of all this. From A wave low to hour 29 to 30 we have that large black engulfing candle which is the most important point on the chart.

The next chart, in Figure 2.4, is a perfect textbook example of a triangle that completed in the correct amount of bars. Here is likely the best example of Guideline 2 in the entire book, as well as your introduction into the profound influence Lucas exerts on the market every day. This situation occurred on the 15-minute NASDAQ E-mini (NQ) on December 11 and 12, 2005. This sequence coincided with one of the Federal Reserve Board's interest rate announcements. The NQ has a tendency to change patterns based on a 47-15 minute cycle. On Monday December 11, we hit a near-term high at 1719, but as we were entrenched in a bull move at the time what happened was a sideways consolidation that manifested as a triangle.



**FIGURE 2.4** Perfect Triangle

Common relationships in triangles dictate at least two of the legs should have a 0.618/1.618 relationship to each other. In this case A and C come very close. However, what is important to note in this triangle is that it confirms in 47 bars. In this case, the 47- to 48-bar window coincided exactly with a Fed news event.

This pattern consolidated sideways for much of two trading sessions. Upon completion of the triangle this market jumped 16 points in the next two bars. Internally, we can see the A wave lasted eight bars, the B wave topped on 13, the C wave lasted seven bars, and D lasted 16 bars (double eight, or 1.618 derivative). Not all triangles are gift wrapped so neatly, but many have relationships just like this one and are easily spotted if you know what to look for.

The next example, in Figure 2.5, is a flat pattern also known as a complex sideways correction. Recall from Chapter 1 this is a pattern where all the legs are roughly equal. In this case we are looking at an hourly chart of Citigroup from late 2005 in a larger ABC down. The flat pattern is the B-wave consolidation before a larger drop. The orthodox top is at 49.70 at the left of the chart. From there we had a first- or A-wave drop to approximately 49.05 where we pick up the action.



**FIGURE 2.5** Complex Flat

The A wave up was five hours. Flat patterns in real time are very tricky to figure out, as we really are not sure of the outcome until most of the pattern develops. In those cases the best thing to do is count the bars from either a high-to-high or low-to-low basis.

This works in any time frame. In this case we see the chart hit a low near support after 11 hours on small A. At this stage, we really don't know what we are dealing with other than a low-to-low cycle that completes on a Lucas bar. It is fair to expect some kind of reaction going the other way, and within two bars we do gap up. We get a reversal and failure at resistance on what I would call a poor timing cluster. The large white candle that fails near resistance at small B is 23 hours off the original high, but does not have a good relationship off the A wave high. The next leg after the failure at resistance goes back to the bottom of the range. As you can see the B wave completes in 20 hours off the A wave high, just one shy of a Fibonacci 21. There is also a cluster at that low as it also bottomed in the twenty-eighth hour off the top, just one shy of a Lucas 29.

The C wave makes a new high on the thirteenth hour, but leaves an upper tail and with the next black candle ultimately fails at resistance. The black candle is 38 hours from the A wave low at 49.05 where the larger C wave kicks into gear. It is important to note that C of the flat makes a new high and sometimes a flat pattern will violate the prior fifth wave top. As we know, the purpose of B or second waves is to reproduce the sentiment of the prior trend. In this case we do get an emotional reaction that takes out the high briefly.

Figure 2.6 takes us to the expanded flat correction. In this case we had an ABC corrective pattern from early March until the end of May 2005, which is part of a larger triangle that began in December 2004 and completed eight months later in August 2005, but we are concentrating on the B wave of this sequence. We start at the A wave low at 433.10 in early April. This pattern traces out an up leg that fills a gap left during the fourth week of March then promptly turns around and sets a new price extreme low. Finally, it turns around and spikes up to 447.50 to complete C of B to end the corrective pattern before dropping down to 421.

What is confusing about this pattern is when you go back to the eighth bar off the high (a small white candle that leaves an upper tail at 435 the week of March 21), it looks like it could be tracing out a triangle pattern. This might be the case, but the internal calculations don't work as well for a triangle as they end up for an expanded flat.

Since this is a learning manual here is an important point. There is a certain part of the Elliott community that gets extremely wrapped up in the



**FIGURE 2.6 Expanded Flat**

academia of these waves as stated in the last chapter. I get e-mails every day from people who follow waves to such extremes they miss the whole point of why they are tracking the waves in the first place. We are looking at a completed pattern here in a textbook. In real time, the situation is much more complex. The whole idea is not to be committed so much to the exact pattern at hand as it is to have a general idea of what we are dealing with. What I'm trying to say here is whether you would have thought this pattern was a triangle or an expanded flat in real time doesn't matter. The idea is that you would be looking for some type of B-wave correction so you would end up being on the right side of the move when it completes. The goal of this chapter is to show you the entire catalogue of patterns in real time applications so you may be able to recognize them more easily the next time you see them. As you can see, the real time applications are somewhat different from textbook drawings.

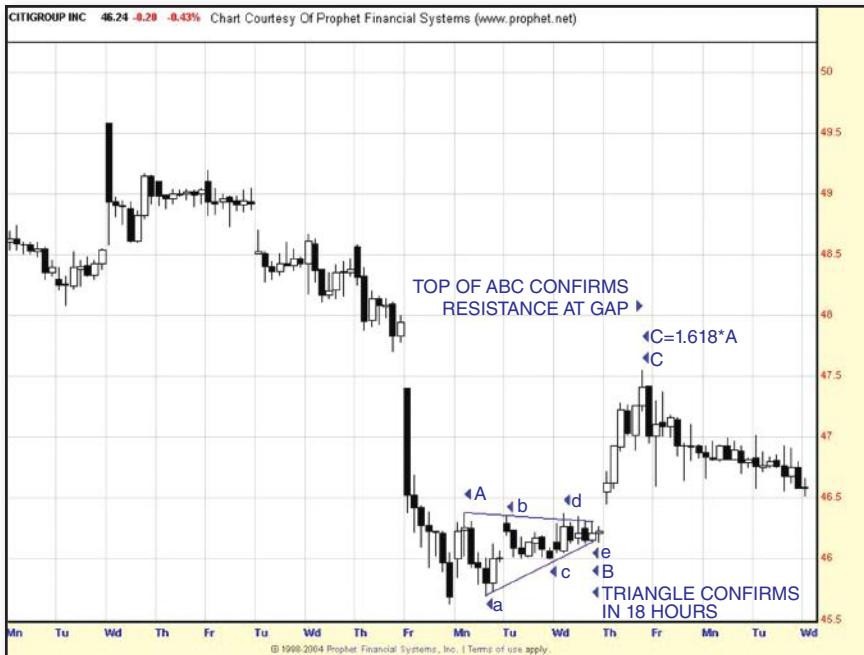
In any event, this expanded flat comes very close to the common Fibonacci price relationship where C is equal to 1.618 multiplied by A. It's not shown in this diagram but the C wave of this expanded flat completes in the 61 percent price retracement off the top of the move. The entire

expanded flat completes in 16 trading days. Finally, is this really an expanded flat or is it a triangle? Note the price where the pattern begins and ends. The A wave low is 433.10 and the B wave top is 447.50 for a move of exactly 14.40. The price of 14.40 is one tenth of 144, which is a very important number not only from a Fibonacci standpoint but from a financial geometric aspect as well.

Let's introduce another important concept. Many moves will not only complete in the correct time sequence but the size of the move will also correspond to a Fibonacci or Lucas number. Does this happen every time? No, but often enough to be aware of it. We will see entire moves complete in 13 points or 61 points or 144 points. On intraday charts we will see moves complete in 4.70 or, in the case of currencies, 47 cents. This is just another guideline to be aware of and use as a tool. Don't get wrapped up in it, but be aware of the pattern-recognition aspect. As I stated in the first chapter, one of the missions of this book is to take away much of the subjectivity of Elliott. Where does a wave begin and end? Looking at the price action and seeing a correlation to a specific number pattern may be the final clue. In this case the 14.40 tips the scales in our favor to conclude this B wave was a high-probability expanded flat.

Let's look at some triangles. The next triangle, in Figure 2.7, shows Citigroup in a typical ABC up where the triangle is the B wave. From the top of A this pattern confirms in 18 hours. From the low near 45.60 to the high near 47.52, C has a 1.618/0.618 price relationship with A. Inside the triangle C down has a 0.618/1.618 relationship with A down.

While this is a textbook example of how a small triangle completes in the correct number of bars, there are a couple of other important relationships to be aware of on this chart. First, look at where the C wave tops near 47.50. Notice the gap down near 48 to 47.50 four days earlier. This gap has the potential to act as resistance but needs testing and confirmation. The C wave fails right at resistance. This confirms resistance, but there is another not-so-obvious relationship on this chart. Go back to the start of this down leg at 49.52 and count the bars. You will find this C wave tops in the seventy-sixth hour off the high. In the chapter on wave rotation I will show you how these high-to-high cycles are great clues in recognizing the prevailing trend. Putting all of this together, we have a small ABC sharp correction in a downtrend. The ABC pattern contains an 18 hour B-wave triangle which confirms. We also complete the correction with common Fibonacci price relationships that confirm a gap as resistance and we do it in the correct number of hours in the larger-degree trend. Need more confirmation? The



**FIGURE 2.7** Citigroup Triangle

turn down at the gap shows a candlestick evening star reversal pattern that gives you a low risk/reward trade if you place a stop one tick above the high.

The next chart illustrates a few very important principles concerning triangles. There are a couple of principles we've covered before and another you may have read about in other Elliott literature.

Figure 2.8 is an hourly chart of a Google triangle. Note that A and C down have an approximate 1.618/0.618 relationship to each other. As stated previously, this doesn't always happen but occurs often enough to look for. Also, look at the various time relationships that confirm this triangle. The B wave high tops in a 29-hour high-to-high cycle and the C wave low bottoms in the fifth hour of the pattern. Finally, the E wave of the triangle completes in the seventy-seventh hour and the breakout completes in the seventy-eighth hour.

The principle this pattern illustrates is the thrust measurement. The thrust measurement is a tool to project a target price for the fifth wave completion. The correct way to do this is to wait for the completion of the triangle and draw a line connecting both the A and C wave lows. However, there is a correct way to do this. We don't take the price length of the A

**FIGURE 2.8** Hourly Google Triangle

wave. Rather we take the point in time from where the triangle started (which is the end of the prior move up), and draw a line straight down into space and extend the triangle line that connects the A and C wave lows.

In this case we have a thrust measurement line from 394 to 432 or about 38 points. We can see the move off the end of the triangle started at roughly 411 and topped at 447, or 36 points. Sometimes these projections will work out perfectly, but this is a tool to get an approximate target point for the completion of the fifth wave.

You must use common sense when expecting this tool to work. It works best with fourth wave triangles after an extended move. It tends not to work out with B-wave triangles at the start of corrections. For instance, let's say we start a countertrend move after a complete five-wave sequence of 1000 Dow points (in either direction). Let's say the A wave is 200 points and we start a pullback. Let's also assume we are going to retest the move with a 61 percent correction. That means we expect the Dow countertrend move to be roughly 660 points. If the A wave measures 200 points and we go sideways for several days and the thrust measurement only retraces 50 percent or 100 points, it is very likely a thrust measurement isn't going to work.

There are two principles at work here. An A wave of 200 points calls for a C-wave extension of 1.618 or 2.618, which would mean a move of 323 to 523 points from wherever the B-wave triangle completes. If the B wave measured 100 points you can forget about the thrust measurement. However, we can anticipate a thrust working out if the majority of the move is already completed. In the case where we get an A wave which is only 200 out of a potential 660 points, you can obviously see why a 100-point retracement won't give you a target for the end of the leg. The numbers don't add up. In the process of this theoretical 523-point correction let's say this C wave completes the third wave and starts a small-degree triangle. We can then start thinking about projecting the top of the move based on the thrust from the triangle. The moral to the story is thrust measurements work better after big moves, not before them.

What we want to see in our triangles first of all is the correct look. It has to look like a triangle. Second we want to see that at least two of the waves have the common 1.618/0.618 common price relationship. It doesn't always work out that way, but it does a very high percentage of the time. To close the gap we look to the time element. I always look for some confirmation of the pattern via the time element. I look for the completion of the pattern to line up with a time relationship. If I don't get it on a daily, I usually get it on the hourly or smaller time frame. If for some reason I don't get it exact on completion of the pattern, I can usually break it down into component parts. What that means is one or more of the legs will have a perfect time relationship and more than likely one or more of the legs will line up with the correct number of bars in a high-to-high or low-to-low time cycle. The next time some Elliottian hypothesizes about a particular pattern you can check their work with a time confirmation.

One of the most important rules of understanding Elliott and the implications of whether the action will break up or down is the overlap rule. We covered this in the first chapter, but I want to illustrate this principle with some real-world examples.

Figure 2.9 illustrates a pullback wave off the bottom of the sell-off leg into early June 2006 in the NDX. This leg is properly counted as an ABC down. However, for teaching purposes I've intentionally labeled the move as waves one through five. I've done that so you can see the overlap. As you can see, wave four invades the price territory of wave one. When we see conditions lining up like this, it is a tip-off that the pattern is corrective and the result will be a continuation of the move. In this case, we had an 18 bar move off the bottom. However you label this correction, it is a 56-bar



**FIGURE 2.9 NDX Pullback**

five-overlapping wave that confirms a low. There will not be much dispute by Elliotticians here as to the pattern labels. What is certain is the pattern completes in 56 bars. That is a fact. As you can see, it next explodes to the upside. As this wave was progressing, the only clue about what would happen was where the overlap would end. Our high-probability tendency gave us a good clue.

Figure 2.10 shows the exact same principle. We have five overlapping waves to the upside that tests a gap of resistance. Once again I've labeled the waves one through five so you can see how the fourth wave violates into the price territory of wave one. Once the fifth wave—which is just really a small-degree C wave of an ABC—ends, the next leg down retraces that whole overlapping sequence up to create a fresh low.

While the purpose of this leg is to show you how overlap works, I snuck in a few time relationships so you can see how apparent they are on every chart. What I've counted as wave three up completes a small-degree 62-hour high-to-high cycle with the original high near 75. We had a small-degree fourth wave down which overlaps one, but the fifth wave in the sequence completes an 18-hour high-to-high cycle. This high-to-high



**FIGURE 2.10** Hourly Crude Oil

cycle also clusters with the entire five-wave sequence that completes in 46 hours. Note that we have an 80-hour high-to-high cycle off the original high which is not a Fibonacci sequence. We can argue that an 80-hour cycle is a Fibonacci  $8 \times 10$ , but I think it's a stretch. What is important here is the leg completes on a two-time frame cluster. More importantly on a technical basis, it fills the gap down and fails at the top of a resistance zone. Finally, the entire move completes in 145 hours (Fibonacci 144+1) from the original top, as you can see at the bottom.

Figure 2.11 shows the Dow in 2004 and the NASDAQ had a similar pattern. Sentiment at the time was such that the highs made in January and February 2004 represented the end of the big 2003 rally and a likely resumption of the bear market from 2000 to 2002. This was to be a mistaken assumption, as this leg was very choppy with overlapping legs throughout.

This leg also represents another concept important to Elliott. Impulse waves are considered as fives, nines, and 13s, although 13s are rare. Corrective legs are threes, sevens and 11s. As you can see, this leg is clearly a seven. It is also loaded with its share of good time relationships. The first



**FIGURE 2.11** Dow 2004 Correction

two high-to-high cycles are 34 and 55 days and completes a larger 89-day high-to-high cycle. The next-to-last low completes in a Lucas 123 days. The whole pattern completes in 173 days, which is not a correct time bar but on the weekly chart this entire pattern completes in 35 weeks (Fibonacci 34+1). The entire leg off the bear market bottom is approximately 71 weeks, and with a 35-week pullback we had an approximate 50 percent time retracement. Much of this may seem like a lot to remember, but it is like anything else that is new. Once you get the hang of it, these concepts will be second nature to you. Later on in the book we'll simplify concepts and show you the most important things to look for. Now we are laying the groundwork. On this chart we are combining the time principle with patterns you may have been working with for years.

The final pattern in the Elliott catalogue is an ending diagonal triangle as shown in Figure 2.12. This pattern has the shape of a wedge and is the only pattern that allows overlap and is still considered to be an impulse wave. As mentioned earlier, the overlap aspect of this pattern is confusing, as market participants confuse it for a countertrend correction. Problem is, it completes and turns up, going the other way for good.



**FIGURE 2.12** Cocoa Ending Diagonal

Elliott literature states this pattern has measurements of five being  $0.616 \times 3$  and 3 being  $0.618 \times 1$ . This is great in the textbook, but in real life it doesn't always work out this way. The most important concept to take from this discussion is the look and shape. Are the trend lines converging? If so, is it in a C- or fifth-wave position where it is at least in the environment where it can actually be an ending pattern? These considerations are much more important than the exact textbook measurements. However, the theme of this book is all patterns should conform to sometime element. Ending diagonals are no different. The example here is a 30-minute cocoa chart. This particular wave is the fifth wave of a B- or second-wave move that confirms a low. The entire pattern is not shown, but you can see what happens when the wedge completes.

As you can see, this particular pattern completes in 48 (Lucas 47+1) bars, but if you look closely at the first and last bar, each made very quick turns so we can make the case this actually spent 47 complete bars (counting shared bars) going down. The internal count shows a 16-bar drop followed by two more 16-bar low-to-low cycles. What follows is a fantastic looking impulse wave to the upside where you can see five impulse waves. This ending diagonal has the look and does the job.

**TABLE 2.1** Important Time Windows

Fibonacci	Lucas	Ratio	Sq. Root	Sacred Geo	Gann
5	7	0.146	0.382	1.414	36
8	11	0.236	0.485	1.1755	45
13	18	0.382	0.618	1.73	72
21	29	0.618	0.786	1.90	90
34	47	0.786	0.886	2.236	144
55	76	1.27	1.12	3.14	180
89	123	1.618	1.27	1.272	225
144	199	2.618	1.618	0.447	270
233	322	4.236	2.058	0.707	315
377	521	6.854	2.618		360
610	843				

## ■ Important Time Windows

As we go forward, Table 2.1 should be your guide. I've included the most important time window numbers. All Fibonacci and Lucas numbers can be considered high-probability windows. The ratios and square roots listed here are important as well. What that means is we can have turns after 61, 78, 127, 146, 161, 261, 423, and 685 time units. It is the same thing with square roots and derivatives of the Fibonacci/Lucas numbers. There are other means of computing these same numbers. They repeat over and over. We've added sacred geometric and the most important Gann numbers, but this is also covered in the chapter discussing square of 9.

The markets speak a unique language of numbers. Not only will these numbers correspond to important pivots, but many times price action will change direction on Fibonacci or Lucas price points. They will also turn on dates that correlate to these numbers. Remember the market turned on October 8, 2002? What is that date? 10/8 or 108, is it not? What about some other pivots? There was August 13, 2004 which 8 and 13 (Fibonacci numbers) or in 2006 the markets bottomed on July 18. The SOX topped in 2006 on January 27 (1.27). These numbers are of secondary importance to your trading, but there are no coincidences in financial markets.

What have we accomplished in this chapter? We've advanced beyond basic Elliott pattern-recognition methodologies and shown you these time elements exist, because many market participants didn't even know that. Since you have an awareness of what market precision looks like, you can start to

tune in to it. This is just the first step. The next chapter will teach you the first step in pattern recognition. Now that you know these sequences exist, you will learn how to interpret them.

In order to read and write for the first time, you had to learn the alphabet. This may seem elementary now, but when you were three or four years old, you didn't know how to sound out the alphabet. Finally, you realized there was an alphabet, but you didn't know what to do with it. Next you learned a few words and put them into sentences. As your vocabulary expanded, you advanced to learn proper spelling and grammar. It's the same thing here as we'll take this new language of the markets and put it into words and sentences.

# Rotation

**N**ow that we've set the table by explaining the basics of how the time factor confirms Elliott, let's have some fun. Forget about trading and financial markets for a minute and pretend you are the starting quarterback or coach of your favorite pro football team. There are 32 teams in the National Football League and they all pick talent from the same place. Every February, all the coaches go to the Scouting Combine in Indianapolis and analyze the same players. If they are all digging from the same well, why do some teams do better in the draft than others?

Since there isn't much difference in the talent level from one team to the next, why are some organizations more successful than others? Why do certain coaches win wherever they go? Just like anything else in life, luck plays a part. Certainly injuries and bounces that don't go their way play a part. These are excuses; everyone has excuses. Teams can make excuses about why they don't win just like traders can make excuses why the market went against them. Real winners don't complain.

I was always fascinated how Dick Vermeil would spend 18 hours a day at the facility and sleep on the couch in his office from the time training camp opened until the season ended. I'm sure it didn't do wonders for his marriage but he succeeded at every level of football. He took the Eagles to the Super Bowl in 1980. He evened retired from coaching but came back 14 years later and this time won the Super Bowl showing that his methods are timeless. What separates the mediocre from the good and the good from the great?

## ■ Preparation

That's it. The best players don't rely on their athletic ability. In a business where the competition has the same level of talent, victory usually goes to the group that prepares the best. Everyone watches hours of film to find that edge. What they are all looking for is the tendencies of the opposition. They want to know what XYZ team is going to do on first down, third down. They spend hours crafting a strategy for every imaginable situation. They want to know the strengths and weaknesses of the opposition so they can craft a winning game plan.

In baseball, pitchers and catchers spend hours studying hitters to know what pitches they like and what they can't hit. They know what a certain hitter averages against lefties, righties, on the road, at home, you name it.

In poker, professionals spent hours studying the other players at the table to uncover their tells, which are their unconscious moves that might give away the kind of hand they have. These things are not easy, but they are the difference between winning and losing.

The common thread between sports and poker is they are games of probability. Coaches breakdown film to discover what the opposition likes to do in certain situations but they find the opposition won't do it in every case. Bill Walsh was the first coach to script plays. He knew the opposition scouted for his tendencies. What he did was create 15 plays to start every game. No matter what the situation was, his team ran those 15 plays whether it was the correct thing to do in the situation or not. Why did he do this? He didn't want to be predictable. It was a good strategy because the opposition never really did figure him out, did they?

The whole point of this discussion is the very best in any profession prepare to be ready for any contingency that could come up in a situation. What I've done is follow the markets for thousands of hours and have uncovered high-probability tendencies that repeat over and over. There is no tooth fairy. While these tendencies do repeat over and over, no two patterns are ever the same but the probabilities are high enough that we can craft a winning game plan. The best way to approach the rest of this chapter is to study these charts and then go to your favorite chart in real time. Don't trade, just watch. How long should you watch? Long enough so you get the hang of it. This can range anywhere from a few days to a few months depending on your time frame. After you watch, come back here and look at the charts again. Every time you do this process you pick up things you haven't seen before. What you are doing in effect is rewiring your brain to visually pick up observations you never experienced before.

Since I wrote this chapter the first time I've obviously had a lot of time to think about it. As we work with clients all over the world I see the biggest

problem they have is one of discipline. People come up with a game plan as discussed above and they find themselves taking trades that weren't in the plan. That is a recipe for disaster. Trading in real time is difficult and catching moves in fast markets are very challenging. If you are following the count of the bars, what you want to do is combine it with another methodology such as candlesticks, which are discussed in the next chapter. Don't take a trade based on the time count alone. Using leading indicators such as the time dimension is a two-edged sword. The time window may or may not validate. But if you do get a 21 or 34 bar at the end of a correction you will increase your odds of success exponentially if the candle formation lines up properly.

The rest of this book is designed to give you the winning game plan. By the time you finish this book you will be better prepared to deal with any market condition with greater effectiveness. Not only will you be prepared to take advantage of opportunities the market offers you, but you also recognize in advance when you should be on the sidelines. Let's say you just bought a new silver car. You may have always driven a blue car. Now that you drive a silver car you will begin to notice how many other silver cars actually are on the road. You may be surprised to learn it's a lot more than you thought. Once you start working with these time cycles, you will be surprised how much and how fast you actually pick it up. You will also recognize when cycles are not lining up. At these times you should stay on the sidelines. As you know, not every market condition is conducive to making money.

In this chapter I introduce the concept of rotation. You won't find rotation in any other book on financial markets. Rotation can be defined as the organization of how the price bars cycle in order to determine whether we are in an uptrend, downtrend, or sideways correction. Think of weather patterns. Certain conditions are better organized than others. I hate to use this example but think of a hurricane. What does the weather guy talk about? How well the spiral of the storm is organized. Notice how strong category three through five storms have a much tighter rotation around the eye wall than do category one storms or even tropical depressions. Category one storms have weak spirals around the eye. You can barely make out the eye. Recall how obvious it was to see the eye wall on a storm like Andrew or Katrina.

## ■ Organization of Bars

Financial markets work the same way. The better the organization of the bars, the stronger is the trend. Bull phases rotate or spiral differently than do bear phases. Most technicians or Elliotticians realize a bull phase will move north

of some moving average but eventually extend and come back to the mean. In other words, a bull phase creates a low-to-high-to-low cycle. From now on we'll call it a low-to-low cycle. A bear phase is just the opposite. It will start at some high, drop for X number of points below the mean or moving average, and come back up to it. In other words, it's a high-to-high cycle. Many Fibonacci analysts will keep track of the bars from north to south or south to north. Here we do that but also the complete round trip. Why do we do this? Financial markets trend in moves that have the shape of triangles. In this case, I'm not talking about a contracting or expanding triangle in the context of the Wave Principle. Draw a line from any important pivot low to a high and back to the next important pivot low. What do you get? In every case it's a triangle.

What financial markets do that most people don't realize is these high-to-high or low-to-low cycles will complete on either a Fibonacci/Lucas or Gann time bar. When we recognize that fact, we've uncovered the most important tendency in financial markets. I call these spirals *Wave Rotation* and we are either in a bullish or bearish rotation. In the early phases of moves when it is not obvious if the prior trend has completed, it is the recognition of how a wave *rotates* that gives us a major clue if the trend has really changed.

If you've noticed up to this point, keeping track of the bars is *the most important* exercise in this methodology. Keeping track of the bars is the same as keeping track of the waves or the shape and size of a candlestick. In order to keep track of the bars, first you must keep a running count of them. This does require extra work and at first may seem burdensome. Many traders will keep four or five technical indicators below the price action. Many times these indicators give contradictory information, which causes paralysis by analysis. Isn't that burdensome? Why not use a methodology that is more effective and cuts to the bottom line of what is actually driving the action? However, counting bars only gets you to the starting gate. Counting the bars is the equivalent of learning the alphabet. You can't make words without the alphabet, but it does require training to get beyond that level. Each particular bar has a meaning and implication to the overall scheme of things. The good news is we don't have to get overly wrapped up in the meaning of *every bar*.

Let's assume you buy into the fact that keeping a bar count is a worthwhile exercise. Now we are going to give meaning to those bars.

Figure 3.1 highlights a bear leg for Newmont Mining (NEM). All stocks, indices, futures markets, and Forex currency pairs work the same way. I would suggest you study this chart over and over. When you get the hang of it, apply the concepts to your favorite market or stock.



**FIGURE 3.1** Newmont Bear

The first sequence is a high-to-high cycle that completes in 11 (Lucas) hours. You can see hour 11 produced a hanging man candle followed by a large bearish engulfing bar, which implies a failure of the retest of the high. This now became strong resistance. Notice the next spike up was on the eighteenth hour of the trend. This is what I mean by rotation or spiraling. A bear phase will either spike or create a high on the chart on a Fibonacci or Lucas number bar within plus or minus one. What I observed after thousands of hours is the strongest moves will exhibit the spike right on the number. The third spike in the sequence completes on the eighth hour after the eighteenth spike bar. Up to this point you've had three opportunities to get short. There were 11-hour, 7(eighteenth)-hour and 8-(twenty-sixth) hour high-to-high cycles.

Follow the progression of the third wave. From the 26-hour spike, it moves another 13 hours to create a small-degree low with that hammer. That thirteenth-hour low is also 39 hours off the high (Fibonacci 38.2) as well, but not shown 143-15 minute bars off the top. The next spike high is in the eighth approximate hour, which clusters with the forth-sixth hour off the top. In other words, the forty-seventh hour starts the final leg down and this final leg completes in 18 hours. What is not shown but highlighted is that the whole trend completes in 235-15 minute bars, which are off by

two from 233. In a 10-day span, there are no less than 12 important time relationships on this chart. There are probably many more if I chose to count what might have been going on at the five-minute level.

There are a few other relationships on this chart. In terms of price, the action is somewhat choppy and would best be counted as an ABC down as opposed to a five-wave impulse. The reason being the spikes at both the 18- and 26-hour marks both invade the price territory of the first small leg off the top. This applies to the overlap rule. Still, there are three major thrusts to this move. However, if you go by strict Elliott interpretation, what you would call the first and fifth waves do not have a 0.618/1.618 common price relationship. However, when you put the time x-ray on these legs you will see each is an 18-hour duration. In terms of time you could say 1 equals 5. However, when you measure the leg from the top all the way down to the hammer on the thirty-ninth hourly bar, you will see it has a 1.618/0.618 price relationship with that last move that started in the forty-seventh hour. So this bests counts as an ABC down where  $C = 0.618 \times A$ . The waves are not labeled because the point of this discussion is to show you the rotation of the bars and the finer detail of market precision. There is no subjectivity here at all. Just like the outcome of a sporting event a spike on the forty-sixth hour is exactly what it is. No more and no less.

Ask yourself the following question. Do you really need to know the exact wave count when all you really need to understand is the tendencies of what the bars can do? By understanding that when a spike occurs on a specific numbered bar, you trust the flow because *this is the specific language of the market*.

The next chart, in Figure 3.2, illustrates how you can get lost in a wave that really doesn't have a clear count but still be able to navigate your way through the maze. This is a daily chart of Intel. As you can see, these waves are not choppy, but while in real time it would have been very difficult to count. However, this wave is very representative of fast-moving bear waves we've seen in recent years. The problem is if you miss the top, it is very difficult to find a good entry point. How do you not get lost on the chart?

The answer is understanding how the waves rotate. In managing a leg like this, it is very important to manage the bar count because it works as your servant. Starting from the top, we can see the first spike completes on a Lucas cluster of seven days up, but 11 days on the high-to-high cycle. When you get that type of cluster, there is an extremely high probability of a continuation of the trend right there. But since we should wait for confirmation, we get it in the form of a nice black candle on the next bar. By the way, don't



**FIGURE 3.2** Intel Progression

attempt to trade any of this information at this point. The last chapter ties it all together.

The progression down shows every single pivot either spikes on the exact number or within one of either a Fibonacci or Lucas bar.

Finally the last drop pivots on the fifty-fourth day off the top and begins falling on the fifty-fifth day of the move. The move ends on the 75- to 76-day window. As you can see, by diligently keeping track of the bars, the market offered you three to four good shorting opportunities on the way down. If you don't know these tendencies you stand a good chance of entering on the wrong bar and getting stopped out. Even though you've done everything right, this is still a difficult process and you can still get stopped out. The difficulty of course, is having one of these spikes go against you. Let's address that issue.

If you are a swing trader and following the action on this daily chart, what you want to do is scale down to an hourly chart and use the exact same formula. What you are likely to find is a similar progression or rotation of the bars on the hourly time frame. You can get a much more precise entry that way. By following the bars, you will still get stopped out as this methodology is not the tooth fairy. However, if you are following the bar count as well

as the candle formations you will find that you are getting stopped out less often and your trades will consistently have better risk-reward ratios. What this method will do for you is slowly over time instill greater discipline. You will find yourself pulling the trigger more selectively and with greater confidence. Why? Because if the markets are spiking on a non-Fibonacci/Lucas bar, chances are the spike isn't over and you don't need to act yet. Patience is a trait that can be developed over time and you need to let the market come to you. Of course, no methodology is perfect and markets will do whatever they want beyond our scope of understanding. When that happens your losses will be small. When you hit, likely you are catching the start of a move. You will find yourself consistently getting into trades where the risk-reward ratio is three- or four-to-one in your favor.

What happens in bigger moves all the time in all degrees of trend is they will cycle from one pivot to the next on these rotational bars. Many moves will travel 13, 18, or 21 bars with the trend and then pull back or spike to get a triangle-like formation of 18, 21, 26, or 29 bars and the trend resumes. Sometimes we'll get a move of seven bars in the direction of the trend and get a four to six bar pullback to give us a cycle of 11 (Lucas) or 13 (Fibonacci) bars. This goes on every single day on every single chart. Most people just don't realize it.

By far, the most important spike or pullback is the first one. The idea behind trading is not to be right all of the time, but make sure that when you are right you let the winners run so your gains will be larger than your losses are small when you go fishing for moves. What we want to do is catch third or C waves on a consistent basis. By far, the best opportunity in this sequence was the failure near the top when the 7 to 11 cluster bar failed. Of course, we don't know for sure that it is going to be a big move. However, common sense dictates that the very first failure and confirmation of a move off the top might lead to the best move of the sequence. We don't know what can develop but had you taken a trade near that 7- to 11-bar, your stop-out point would have been 1.00 to 1.50 away. A 1.618 extension of the first wave would have taken price action down near 24. In the very least you had a two- or three-to-one ratio in your favor. Of course, scaling this down to an hourly time frame would have enabled your risk reward to be even better.

The next chart is not as complex as the Intel chart but no less important. Figure 3.3 shows a complete low-to-low cycle. First there is a bullish rotation, the market turns, and you have a bear rotation. Finally, we see how the entire cycle completes. We are looking at a five-minute chart of the NQ from December 2005. This was a corrective period in the latter stages of a



**FIGURE 3.3 NQ Five Minute**

bull market. As you can see, in the course of one trading day we had a sharp rally, unexpected pullback, and rebound by the close. Why such volatility? The best explanation is this action is representative of a mature market.

Whatever the case, this was a wild day and the only way it really could be navigated properly was by understanding the rotation of the bars. As we covered in the last section, the best risk-reward ratios come after the first pullback and retest of a low. This is a perfect textbook case. In the last chapter, we discussed how basic Elliott theory won't alert you to a trend change. After the chart topped on the thirty-fourth bar we don't really know the trend has changed until we see the bars starting to rotate on a high-to-high basis as opposed to the low to low in the first part of the sequence.

From the start, the third wave up exploded with a nice white candle on the seventh bar and hit the high note on the seventeenth bar, one shy of a Lucas 18. Nothing is ever perfect and in this case your entry might have been around 1678 as it was closing near the top of the prior black candle. Your risk at that point was only two points as the secondary low was at 1676. This leg topped at 1684, which qualifies as a decent three-to-one risk-reward ratio but also six NQ points in less than an hour. At \$20 a point that is not a

bad wage for an hour's work. If you are using this methodology on the ND, which is the big futures contract at \$100 per point, as you can see you've just made \$600 in an hour. The money amount is not as important because some have bigger bankrolls than others. The point is that whatever level you are at, this is a fundamentally sound approach to attacking these markets. On a wild day like this one was, your compass was as steady as a rock.

Continuing with this example, we completed another small pullback on the twenty-first bar and completed the entire move on a Fibonacci 34-bar cycle.

On the bear side, we failed at resistance and started dropping on the seventh bar, hitting a small-degree low on Fibonacci 13. This would be your clue we are not in the fifth or C wave but in a new progression down. The chart made a small-degree high-to-high cycle on bar 16 and completed the downtrend on a Lucas 29 bar. What is more important in this example is how the entire cycle completes in the 61- to 62-bar window.

There are many lessons and observations to glean from this chart that you will see repeat over and over in all financial markets in all degrees of trend. Aside from the rotation is the triangular nature of cycles. Static cycle theorists believe stocks move according to exact time periods. We hear talk about the four-year cycle, 50-month cycle, and 39-month cycle. It's all nonsense. The truth of the matter is what you've just seen on a five-minute chart is representative of all time frames. Charts are constantly finding tops and bottoms on Fibonacci- or Lucas-based roundtrips. Since we are dealing with snowflake-like patterns, no two are the same. But the tendencies are. Yes, we started this chapter with a discussion of tendencies. Study this chart well, because you will see similar type moves in the charts you follow for the rest of your life.

The next lesson is strictly for Elliotticians. This chart is somewhat choppy. On the way up, you can see the pullback at bar 21 touches the price territory of wave one up. If this is a fourth wave, it's not supposed to even graze the territory of wave one, but it does. Since it does, you may become confused and think bar 17 was the top of the move, the logic being we just completed a small-degree ABC up. Another issue is the fact we've been told fourth waves are not even supposed to approach wave one highs at all. I'm here to tell you it doesn't matter. Does it really matter what the wave count is if you are trying to trade this chart in real time? The action moves too fast for you to think about it. This is very difficult to track in choppy environments. On the way up, the only price relationship that does work is bars one through four (wave one) as measured from the bottom of wave two (bar seven) nets

us a 1.61 extension very close to where we topped at bar 34. As we will see later on, many of these charts don't give us a perfect Fibonacci calculation, but I'm giving you a peek into the more advanced concepts that we'll get to later. The only factor that is crystal clear is the bar count.

If you pay close attention to these waves, on the way down you can make out two very small-degree five wave sequences for an ABC sharp correction. Wait! If on the way up the leg at bar 21 grazes the territory of wave one, by Elliott academic logic the corresponding leg down should take out the low near 1674 but it does not! One can argue we have corrective legs going both ways. However, if you do your own due diligence you will see that on December 20, 2005, we were in the midst of a correction on the daily scale that began on December 6 and ended on December 30. As corrective legs are confusing, they can go on for days on end. What are you going to do, not trade? The bar count just eliminates subjectivity and replaces it with high-probability tendencies.

Clearly, we can see that much of what we learned from the prior Elliott literature applies more to the academic than the real world. I don't mean to upset anybody here, but one of the goals of this work is to eliminate as much subjectivity as possible.

## ■ Bigger Moves

Now that we've introduced the concept of rotation and you've seen how a bull and bear cycle works, it's time to take this to the next level. The idea in trading is to increase the odds as much as possible that a trade can work in our favor. Obviously, some legs are better than others. The next chart is an illustration of a bullish rotation with clusters that line up at the same spot. Recall at the start I stated more relationships that cluster at a certain point, the greater the probability of a reversal. A variation of that would be the more relationships that cluster on a spike or pullback, the greater probability of the continuation of the trend.

Figure 3.4 is a 15-minute XAU chart. I know you aren't going to trade the XAU specifically, but this relates to any gold stock or any other chart for that matter. The first pullback creates a great buying opportunity on the eleventh bar window. As you can see the 11- to 12-bar window ends the pullback and the white candle implies higher prices ahead. Pay very close attention to the next sequence. The chart creates a triangular looking semicircle. The next pullback ends on the twenty-eighth to twenty-ninth



**FIGURE 3.4 XAU Progression**

bar off the low. That in itself is good enough to create a buy signal. However, there are more relationships there. That white candle near the 126 price low also marks the eleventh bar of the small pullback. But there's more.... The twenty-ninth bar (which is that black candle just before the big white candle that really starts the move) is the eighteenth bar off the last pivot low. That 28- to 29-bar window is actually a cluster of three relationships lining up in the same place. If you are more conservative minded, I recommend you take trades where there are two relationships lining up in the same place, but three is an almost guaranteed winner!

I started this chapter with a comparison to weather forecasting. The better the storm is organized, the more damage it creates, right? In financial markets, the more relationships that line up at a cluster, the better it is organized. I don't understand the reason or have an explanation as to why some waves are better organized than others, but I do know that it is so. When you see waves organized in this manner, you need to have the courage of your convictions and stick with the move. In this case, we are looking at the internal workings of the big wave up in gold stocks in 2005 to 2006.

Also notice that as the move progresses the organization loses a little strength. We can compare this to the storm that finally hits the shore. The

next small pivot is still organized as the last small bar near price point 128 marks the eighth trading bar of the pullback and two bars short of that is the thirty-eighth bar off the first pivot near the 11 bar. The goal in these moves if you've missed an earlier entry is to keep track of the bars from one major pivot low to the next. If a pullback ends on the right number of bars and also clusters with a major pivot point from earlier in the trend this is a positive development. If the very next bar breaks to the upside, that is a major clue of a continuation of the move.

As I've said, this is not the tooth fairy. I don't want you to get the idea this is a perfect system. The next sequence shows you how it can blow up in your face. It is true the final move gaps up as a result of another 28 to 29 bar move from a low but be advised that gaps are double-edged swords.

When you see a gap there is a very good chance it will be filled or tested in some way. I wouldn't initiate a position on a gap play later in a move even if it did cluster correctly. The reason being we never know how far the gap will test. It could fill the whole gap or just part of it. The later we are in the move, the worse the risk-reward ratio is.

**Major Guideline:** Buy pullbacks or sell spikes only if you believe they'll lead to third or C waves.

This rule keeps you out of questionable situations. As you will see later in the book, there is always an important time bar that kicks off the major meat of the move. I believe it was Bernard Baruch who said he was willing to forego the first 10 percent and the last 10 percent of any move, but give him the middle 80 percent. The later we are in the trend, the less chance it has of working out. The later we are in the move, only the more aggressive of you should be initiating new positions. I'm not here to pass judgment on what you should be doing. However, there always comes a spot where the best part lays ahead. Usually this happens when the bar count is in the thirties or forties. By the time we get beyond 89 on an intraday chart and 61 on a daily chart we are getting late in a trend.

By the time we get to the higher bar counts, divergences appear and you have to be prepared to take only what the market is willing to give you. As you can see from an intraday point of view what happens at the seventy-eighth to seventy-ninth bar of the move. This is the gap up and already leads to a consolidation.

In this sequence there were two good opportunities for entry where the risk-reward ratio was very low. Both white candles on the 11 as well as the 28 to 29 bars measured a little more than a point. The pivots would be considered your stop-out point. In this case you would have been buying the

third wave up in the movement. The loss potential was roughly a point with at least a three-point reward potential, if not more.

The major criticism in the Elliott methodology has been the subjectivity in calling tops. Most readers of my letter who consider themselves Fibonacci practitioners don't trust the Wave Principle. This is a shame because the two go hand in hand and Elliott is really meant to be more of an analytical tool as opposed to a trading methodology. For much of the first decade of the century a lot of new Elliott practitioners considered themselves very bearish even though much of the decade was in a bull market. Fortunately, this is changing, as there are now other teachers who have learned to go with the flow of the market.

## ■ Timing Clusters

Figure 3.5, NASDAQ, highlights the two principles we've discussed in this chapter. We have a bullish rotation on the upside and finally a cluster of relationships that created the high. This is a daily chart of the NASDAQ showing the 2006 portion of the rally leg from the 2002 low. From the low



**FIGURE 3.5** NASDAQ Cluster

at the start of the year we hit a peak on January 11 and pulled back. We created two pivots, one in February and a retest in March. Both of those pivots bottomed on Lucas relationships to the January low.

The February low was 29 days off the low and the March pivot was 47 days off the low. My forecasting service correctly nailed both of those pivots as days where conditions were ripe for a continuation of the uptrend. From the 2240 low in March we rallied all the way up to 2375 in a little over a month. Here's where it got interesting. During this period all of the indices were exhibiting relationships on weekly charts, which are not shown here. Sticking with this chart for the moment, by the time we got to April, we were 75 days off the January low, 46 days off the February low, and 29 days off the March low. The big drop began on the forty-seventh day off the February pivot and 76 days off the January low. This top in the NASDAQ was created by a triple cluster of relationships that all terminated on three different Lucas relationships. In the chapter on momentum indicators we will revisit this chart one more time as for most of this leg the MACD exhibited a bearish divergence but the trend persisted.

Before we move on let's take a look at the sideways correction that began on January 11. We had an ABC down that either completed on the February pivot or March pivot low. I've labeled what could be a flat correction as A, B, C. What do the cycles say about this? The A low completed on 22 days as opposed to 21, the C low completed on the fortieth day, which misses the 38- to 39-bar window. Keep in mind, in real time we don't have the luxury of knowing what will come next. We can't measure the B leg up against some nebulous future leg up we don't even know will happen.

What we do know is this correction is not very well organized to the downside. This is a complex concept to grasp, but if you are this far into the book I know you can get it. Our discussion of rotation has centered on high-to-high and low-to-low cycles. In bull markets the low-to-low cycle will dominate as the stronger cycle. In bear markets it's just the other way around. I know we are splitting hairs, but if you start from the January low you will see the February pivot is 29 days off a low pivot but also 22 days off a high pivot. Which relationship is stronger? Certainly the 29 day rotation is stronger than 22 days. On the next pivot, is the 47-day rotation stronger than the 40-day cycle to the downside. This is just another way of determining the dominance of the trend. At this point, we can determine we are still in the uptrend. But is the pattern from the January high to the March low an ABC flat? Not likely, because the legs still are not equal but more importantly this period does not confirm on a Fibonacci number.

If this discussion confuses you, *don't worry about it!* You can study this chart over and over until you get it. Just watch the bars. The simplicity of this entire methodology is the bar counts. In this case all you needed to know is we hit a low on 29 days and another one on 47 days.

To continue our discussion of how to recognize a cycle top, the next chart is Figure 3.6, the weekly SPX chart from the August 2004 low up to the May 2006 high. The *Fibonacci Forecaster* actually identified the two highest-probability days for the turn when scaling down to the daily and missed the price target by two points. This chart also illustrates the concepts discussed throughout this chapter. From the low we hit a secondary retest of the low on the eleventh bar. Notice how the next important low in April 2005 clusters on seven bars down but to keep the integrity of the uptrend intact, we are 26 weeks from the 11 bar. The next important low is October 2005. This particular pivot is the sixty-first week of the trend, but also 26 weeks off the last major pivot.

As we started progressing into 2006, it became obvious that something out of the ordinary was happening. Suddenly we could point to the early part of May as a point in time where we would be 29 weeks off the

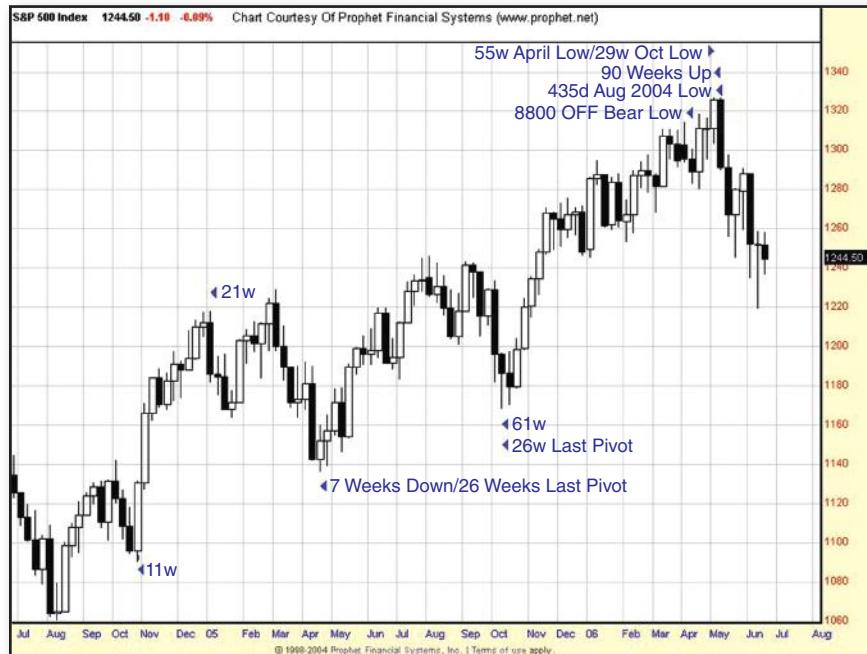


FIGURE 3.6 SPX Weekly

October low and 55 weeks off the April 2005 low at the same point in time. Taking the whole move into consideration, these two pivots barely miss the 89-week cycle off the August 2004 low. We made a new price high barely into the ninety-first week of the trend. Here we have a case where larger-degree cycles (weekly) are lining up just as they do on 5-minute, 15-minute, or hourly bars seen throughout this book.

There is a pivot made in June, which created a 35-week low-to-low cycle with the October low. Could it be the uptrend is still intact? That is a serious question the financial community pondered as this book nears completion. What I can tell you is look at the prior high made in this cycle. We made the prior high in the 1240s back in August 2005. This particular high is in the sixteenth week off the April low and the fifty-first week off the major low. We do not come close to seeing the organization of Fibonacci relationships at that high as compared to the one in May 2006. The June 2006 pivot may be 35 weeks off the last important low, but it is only six weeks off the top. Unlike the October 2005 pivot, the June pivot is now dealing with a top that is very well organized and unlike any other high we've seen in the 2002 to 2006 cycle. If this top is to be taken out, it should not do so before a complete Fibonacci retracement of this leg. It can also be done only by a leg that is well organized. To this point, the June low has only retraced 38 percent of the move. In terms of time, six weeks does not seem to be enough time to retrace either a 90-week or 55-week leg. This is only one piece of the market-precision puzzle. The NDX topped in January and has retraced many more weeks since.

Our final lesson of a bullish rotation is to illustrate the ultimate x-ray of market precision. If you really want to understand what a market is doing, study the one-minute charts. To most people, day trading has a very negative connotation to it. It's negative to people who have no idea of what they are doing. Unfortunately, all we heard during the NASDAQ bubble years is how day traders ended up quitting their jobs and ultimately losing everything. The sad truth is 99 percent of them probably had no idea of wave rotation or how to figure out market precision.

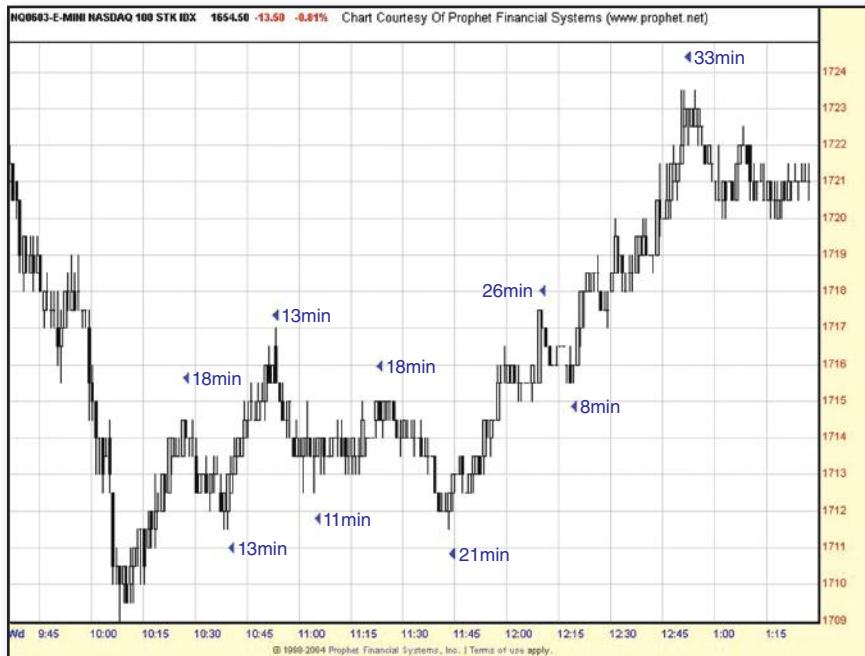
The fact of the matter is a one-minute chart on any futures contract moves very quickly. If you don't know what you are doing it's a big mystery or worse. A one-minute chart can be your undoing it's true, but with the proper training, it could also be the beginning of your breakthrough into really understanding market precision for the first time in your life. After we get through this chart, I think you'll be encouraged enough to examine and possibly trade one-minute charts on your own. In nontrending markets,

understanding this smallest time frame may turn out to be the only way you can make money until market conditions change.

Consider how many minutes there are in a trading day and you can begin to understand how many different patterns you can see even in one trading day. The good news is even on a one-minute chart, universal laws taught in this book are followed with incredible precision.

The first leg up, in Figure 3.7, tops in 18 minutes and pulls back for another 13 minutes. The next leg up is another 13 minutes so we have an ABC up of 18-13-13 minutes. Since there are 44 minutes that have elapsed, if we scaled up to a five-minute chart, you'd see this A wave top in 8 five-minute bars. This is perfect market precision.

The pullback measure 11 minutes for A down, 18 minutes for B up, and finally 21 minutes for C down. There is any number of time relationships just in this little sequence. From the high at 1717 to the low at 1712.50 back up to 1715 we have a tiny 29-minute high-to-high cycle that sets up the final drop of the move, which turns out to be 21 minutes. Three legs with perfect precision but they don't end on a Fibonacci number. Why not? This is a 50-minute correction which corresponds to another 10 five-minute bars, right? If we count



**FIGURE 3.7 NQ One Minute**

the first 44 minutes (8 bars up) and the next 50 minutes (10 bars down) we end up on a five-minute scale with another 18-bar low-to-low cycle. This 18-bar cycle on the five-minute time frame sets up the move of the day. On the way up you can see a progression of 26 minutes followed by an eight-minute pullback which also creates a 34-minute low-to-low cycle which presented itself with the very last chance to get into this move. The top came another 33 minutes later. The entire third or C wave lasts 67 minutes or 13 five-minute bars. While the whole move up to this point is 31 five-minute bars, your precision in this case comes as a result of the first leg being eight five-minute bars and the big leg 13 bars and 8 to 13 has that 0.61/1.61 relationship to each other that we always look for in our price relationships.

What made Wayne Gretzky the greatest player in the history of hockey? He certainly wasn't the fastest skater or the biggest player on the ice. He has been asked that question a million times in his career. His answer was that most players chased the puck. Gretzky always anticipated where he thought the puck was going to go. That's how he always ended up in the right place. Hockey is a very fast game. His ability and anticipation of the highest-probability place where he thought the puck would end up enabled him to slow the game down. It's the same principle here. A one-minute chart moves very fast. That won't change. But if you are able to anticipate the tendencies, the action starts to slow down and you can actually anticipate what will happen next.

Up to this point we've covered what happens in bull and bear rotations. However, we know that markets don't have two possible directions; they have three. Markets spend a great deal of time going sideways. Let's assume you have a good methodology and know what you are doing. You use stops and are not part of the group who stubbornly hung on and lost 90 percent of the gains made in the 1990s Internet bubble. The biggest obstacle to your profitability is whipsaws. Getting chopped up in sideways markets is like water torture. It will bleed your account slowly over time. While it is vitally important to recognize bull and bear moves, it may be even more important to recognize a sideways trend.

The time cycles offered great comfort to those of you who want to get out of the way of a whipsaw market. This can benefit you in two ways. First, you stay out of the larger trend. Secondly, if you scale down to a smaller time frame, it is not only possible but probable you can be profitable when many are sitting on the sidelines. A triangle or flat pattern on a daily time frame offers intraday traders many opportunities to take advantage of small-degree range-bound cycles. While your larger-degree trading counterparts are getting stopped out or having to take heat while waiting for the breakout or

breakdown, 5- and 15-minute time frames offer many chances to profit. The only difference between trading on the daily, hourly, or smaller time units is you get your results much more quickly. In certain markets, intraday trading may be the only way to make money for days or weeks on end.

## ■ Sideways Pattern

How do you recognize a sideways pattern as it is developing? It is the antithesis of everything discussed in this chapter. Nothing works properly. The low-to-low cycles of a bullish rotation don't pan out and neither does the high-to-high cycles of a bear phase. You might get stopped out one time in the sequence, but realize that when the cycles don't work it's high time to go to the sidelines because we are entering a whipsaw type market. One of the best triangles I've seen in the past five years was on the Biotech Index (BTK). On the daily chart this pattern extended over six months, but realize this type of environment happens all of the time on a smaller time scale.

As we work our way through Figure 3.8, things develop well enough. We complete a first leg down in 18 days and put in a good looking white candle



**FIGURE 3.8** BTK Triangle

morning star pattern. We even top on the twenty-sixth day of the move. However, things get very sticky once we get to the seventeenth day off the pivot low. On day 18 we put another good looking white candle and this one comes just days after the 26-day high-to-high cycle. You can see the cross currents starting to develop. The first sign of trouble is this market has no follow through after the 17- to 18-day cycle to the upside. Three days later we turn down to retest the low after we just put in such a promising looking morning star pattern. Okay, we don't respond to the 18-day cycle but then we don't take out the low either. Bears are upset because we didn't take out the low even though we failed at resistance on a 26-day high-to-high cycle. At this point, we have our first clue that nothing is working. It's not working at least on the daily time frame. Understand patterns such as this are a paradise for intraday traders.

As the pattern progresses we get to the twenty-ninth day off the secondary high at 480. We get a nice black candle on a 29-day high-to-high cycle. This one doesn't work either as that high is taken out within a week. We continue higher until we make a cluster high on the seventy-fourth day of the trend, but 31 days off a secondary low and 56 days off a primary low. Compare this high to the ones I just discussed on the NASDAQ daily chart or SPX weekly chart. You can't compare it, can you? That's fine, because the theme of this chapter has been that some patterns are better organized than others. The only hint we may get a turn is the 56 days up. It is not a very well defined cluster but nevertheless we do head down. We find a low as a hammer pivot is put in on the sixty-second day off the low. We do turn back up, but if you've studied every other bullish rotation in this chapter you may have come to expect a large move to the upside based on the 62-day low-to-low cycle. It doesn't happen, does it?

We don't find a low until C expires on the thirty-seventh day of the leg, which is the one hundred tenth day of the pattern. The number 110 to 111 is important as it is a Lucas 11 derivative. One hundred eleven obviously has an 11 in it, but it's all ones. It's not in the table because it is a lower probability. The number 110 is important as it is  $11 \times 10$ . From that point, we finally see that a bullish rotation starts to work. As you can see it breaks out on the twenty-first day off that low.

To summarize what we've covered in this chapter we know that bull and bear phases in any degree of trend have unique characteristics which enable us to tell them apart. We've also learned that sideways patterns give themselves away by not working.

To this point you should have a very good idea of how the time factor works in technical analysis. While this is a good stand-alone forecasting methodology, you should use candlesticks to confirm. As complex as financial markets are, we can never have enough tools in the shed. While this methodology does lend itself mostly to Elliotticians and Fibonacci-style analysts, it need not be that way. This methodology can be combined with any methodology and many technical indicators. We are going to spend the rest of our time together examining how we can continue to improve our odds on taking high-probability trades. You will also see how we combine this work with support and resistance lines.

If you've noticed, all of the charts you'll see in this book use candlesticks. Candlesticks tell more about market behavior than basic line bars. Up to this point, all of the examples have hinted the best way to identify important turns are to combine the time element with the candlestick methodology. The next chapter discussed this concept in much greater detail.

# Candlesticks

When we discuss candlestick methodology we are not just converting simple bars on a chart into the eastern system of pattern recognition the Japanese have perfected. The candles themselves have meaning, but their meaning can only be interpreted correctly in the overall context of market conditions.

I am not going to get into a full-blown course here on what candles are. I assume most of you have some level of understanding. If you don't I must refer you to the Steve Nison materials because he does a much better job of teaching this methodology than I ever will. What I do here is add to the great work Nison has spent developing over the past 20 years.

Understand that when we talk about candlesticks, we are also talking about support and resistance levels. There are many different types of support and resistance levels. In the Elliott community we think of the rules and guidelines of the waves. The most important rule of course is the overlap rule. The overlap of the fourth and first waves is a form of support or resistance. But there are many other types.

We can consider Fibonacci retracement levels as important lines. Also, we can consider trend channel lines, prior high or lows, moving averages, and Bollinger Bands as well as gaps as the most important areas on the chart. Which one is more important? Only the market can decide that one. However, we can get a clue when we find a point on the chart where we get a cluster or confluence of relationships lining up in the same place.

What we are looking for are the highest-probability setups. As we already know, some legs are better organized than others. What we are looking for are recognizable candle patterns that line up near important support or resistance lines and also have the correct Fibonacci or Lucas relationships

expiring at the same point. If this is all you did, you'll do very well. Keep in mind, waiting for these kinds of setups requires patience.

Figure 4.1, 21-Bar Drop, is a five-minute NQ from December 2005. We made a high at approximately 1761.50 near the end of the session on Wednesday. We start a 17-bar drop to 1753 where we reverse. I'm not going to isolate all of the time relationships in these charts in this chapter because in this section I need to concentrate on the most important concept. Notice that in the 10:30 hour price action retests the low with the white candle and this line obviously becomes near-term support.

The relevant points on this chart are from the low we start a very choppy five-wave correction. There is a lot of overlap in this pattern until we finally top on the twenty-eighth bar. We fail at the 1760 level, which also happens to be the secondary high in the first drop. What you will also find that very few others teach is how important Fibonacci or Lucas numbers can also act as support or resistance. In this case, the power of the number 60 in the price point acts as resistance. Whatever the case, we have a failure at the twenty-eighth bar up and it is confirmed by the next candle, a black candle that more than fills the small gap up in the 1758 area. The 1760 area is now



**FIGURE 4.1** 21-Bar Drop

resistance, which is confirmed by a black candle. It is confirmed but the prices aren't going lower, yet. Price action goes sideways until the twenty-first bar off the secondary high. This is an example of Guide 4. While we had a secondary high at bar 28, the real drop is another 21 bars down the road. From there we get a good 15-point drop. Once support at 1753 fails we really shouldn't expect support until this third or C wave measures  $1.618 \times$  the first leg off the top.

To really understand the concept of support and resistance lines, let's revisit the Citigroup chart from the Elliott Wave chapter but look at it from a different context. In terms of the waves, we've already identified it as a flat pattern. When we look at candles, we are attempting to identify lines on the chart that act as support and resistance. As stated above, there are various types of support and resistance. Some are very obvious and others we identify by digging into our toolbox of methodologies.

For whatever reason, the Citigroup chart in Figure 4.2 elected to form a line of resistance near 49.70. It tests this area four times in seven trading days. Starting from the very first high we have a textbook bearish engulfing bar as both real bodies line up in the same spot yet the black candle body engulfs the white candle body. To reiterate, the A portion of the flat completes on an eight-hour high-to-high/five-hour up-cycle cluster just a hair shy of the big resistance line. The next black body down from A covers almost three hours of the move up. Small A completes on an 11-hour low-to-low cycle. What is not identified on the chart but look at the small real body black candle with the upper tail just to the right of the bar identified as a/11 hours. These two candles are identified as a *harami reversal*. A harami basically is a large body followed by a small body. After progress in a trend, prices stall out as the small body implies uncertainty. The harami is usually a lower-probability reversal pattern and not as powerful as an evening/morning star. However, the more the small body is able to recover of the prior candle, the greater the chance of a reversal. If you see a small body recovering  $\frac{1}{3}$  to  $\frac{1}{2}$  of the prior candle, it has a shot. If the candle does go on a good time relationship it has an even better shot.

In this case, when we get back up to the top of the range at small B we have another harami in this case a larger black body covers a little over a third of that big white body candle. This is the third high in the sequence, which really doesn't make a great time relationship. As you can see it's the ninth bar up off the small A low and the fifteenth bar off the prior high. The only time relationship it does manage is its 23 bars off the original high. This small B-wave high has the opportunity to cluster in three relationships, first



**FIGURE 4.2** Citigroup Time Cluster

is the leg itself, and second is the high-to-high cycle with the prior pivot and finally the relationship to the original high. Remember the rule number one about clustering. Let's just say that *if we had* three time relationships lining up right there, that likely would have been where the pattern failed. When it didn't, the door was opened for one more retest.

The chart makes another complete cycle. The B-wave low turns on yet another harami which completes in 20 hours off the A-wave high. As you can see that harami turns on a small white candle compared to the large black one that preceded it. It may have turned price action up, but it only lasts a couple of days.

The final high to this sequence proves the cluster rule to be true. I've identified two time relationships right on the chart. First, this final C leg tops in 13 hours. The next bar, which begins the real move, starts in the thirty-eighth hour off the original top. Upon closer inspection, we see the C-wave high completes in a 17-hour high-to-high (Lucas 18-1) cycle with the prior high. There are three good time relationships at this point as opposed to the prior high having only one. The drop in the thirty-eighth bar is a large black engulfing reversal bar. This is important because it combines

many technical elements for a high-probability setup. First, we have a failure at an important resistance line. Second, the candles are showing decent reversal bars and when you combine those two elements with our time methodology you have a low risk-high reward setup.

Follow the progression as price action moves away from the top. Count the bars yourself.... What do you see? You see a small pivot on the eighth bar off the high and another one on the eighteenth bar. Your last chance to get into this trade is on the eighteenth bar of that small-degree high-to-high cycle at the 49.40 area.

## ■ Lucas Progression

Another fine example of how a chart fails at an important resistance line can be found on this daily December Bond Futures contract in Figure 4.3. Not all failures at resistance come exactly at the top as seen on the Citigroup chart. Often times, we will get a B- or second-wave retest of the high that fails at the 78 percent retracement level. From the top, we put in a 17-day high-to-high cycle that confirms a failure at resistance. The eighteenth bar off the top is the black candle that signals we are pulling away from the top. As stated so often in this book, it is the move that kicks in after support is retested or a failure at resistance, which is most important. In Elliott parlance this is the end of your second or B wave. The rest of the technical community just considers it a confirmation of a support or resistance line. Whatever the case, the setup is ripe for the biggest move of the pattern.

In this case we keep moving down until we get to the forty-seventh day of the cycle, which also clusters with a 38-day low to low with the first pivot low. If you go back to May on the chart you will see an area of support near 113 which holds for the time being. This area of support is confirmed two days later with a big white candle.

You could decide to go long based on the 38 to 47 cluster, which is also confirmed with the white candle. What happens next is an 18-day uptrend that creates a 47-day high-to-high cycle. This time cluster fails and the candles confirm it two days later. We've discussed all of the traditional support and resistance lines. However, there is another one that most people are not aware. When we get these clusters such as an 18-day leg coinciding with a 47-day cycle, these can act as time resistance. The more relationships we have that create a reversal, the greater the chance we have of creating time resistance. We saw this in the prior chapter at the May high in the NASDAQ and S&P 500. Most analysts don't understand how these time



**FIGURE 4.3** Lucas Secondary High

clusters suddenly create invisible ceilings of resistance. The fact is, the better these time elements are organized, the more confident you can be they will not be taken out for a long time. As an aside, the Dow and NDX rallies of 2002 to 2004 had a squaring of time where the first leg was approximately 233 hours and the big 2003 rally leg was 233 (give or take) days. The high that was created by this squaring of time held for 10 months.

Our example ends as the final leg down completes in a 62-day low-to-low cycle with the prior pivot low. If you examine these waves you will once again see how it is the time element that provides you with the best compass because these waves do not correspond to any common Fibonacci interwave measurement.

Figure 4.4 exhibits a complete correction in the XAU from November 2004 until May 2005, which has Lucas footprints throughout the pattern. Most analysts in the Fibonacci community are not familiar with Lucas. We've covered that already. However, since I've brought Lucas to the mainstream I've found that even though there is an element in the Fibonacci/Elliott community who've heard of the Lucas sequence, they have no idea of the profound influence it has on financial markets.



**FIGURE 4.4** Lucas Phase

This particular chart is a complete picture of an intermediate garden variety correction we see in all financial markets. Yes, it's a textbook ABC sharp correction. Check out the B wave. It completes on a 76-day high-to-high cycle. Finally, the C leg completes on a 47-day leg for a complete 123-day pattern.

But this chapter is about candle lines. Just like the last chart on the bond market, you can recognize a failure at resistance by the Lucas bar count. Going back to the beginning of the move, we have an initial failure at resistance on the seventh day of the move. If you isolate bars six to eight, bar six is a white candle, seven is a small tail, and eight is a big black candle. The gap down on bar eight totally engulfs and invalidates the white candle going up. If it wasn't the top itself, it would be an excellent evening star reversal pattern on its own merit.

The A wave completes on a Fibonacci 56 bars down. When the B wave starts, the first thing we want to do is draw the Fibonacci retracement lines to gauge how far the retest of the high may go. I always consider the 61 percent price retracement the highest-probability retest spot. The 78 percent level is already considered the lower probability. In this case we

do have a band of resistance at the 50 percent level created by the sideways move that took up much of December. Price action took it out but couldn't hold it. If we consider the 61 percent level as the resistance line we started counting the bars in advance and anticipation of a possible turn at that level. It doesn't always happen but in this case we have a complete B wave which is 21 bars low to high but 76 days high to high. We take out the 61 percent level slightly but as you can see the chart puts in a mini shooting star upper tail followed by bearish engulfing bar.

Normally, we don't react to this sort of signal. If you are following just the candles, it's really not the greatest looking reversal bar. It's okay, but not enough to pull the trigger. Throw in the retracement levels and we begin to understand why a reversal might work. However, when you take everything into consideration we begin to build a good case for the reversal. In this case, we have a time cluster of 21 to 76 days, the 61 percent retracement level, and the mildly bearish candles.

In Nison's books he advises not to take a trade based on the candle line exclusively. That's true and this is a textbook case for it. Now that you are aware of the time factor you will begin to anticipate when a chart can turn-over.

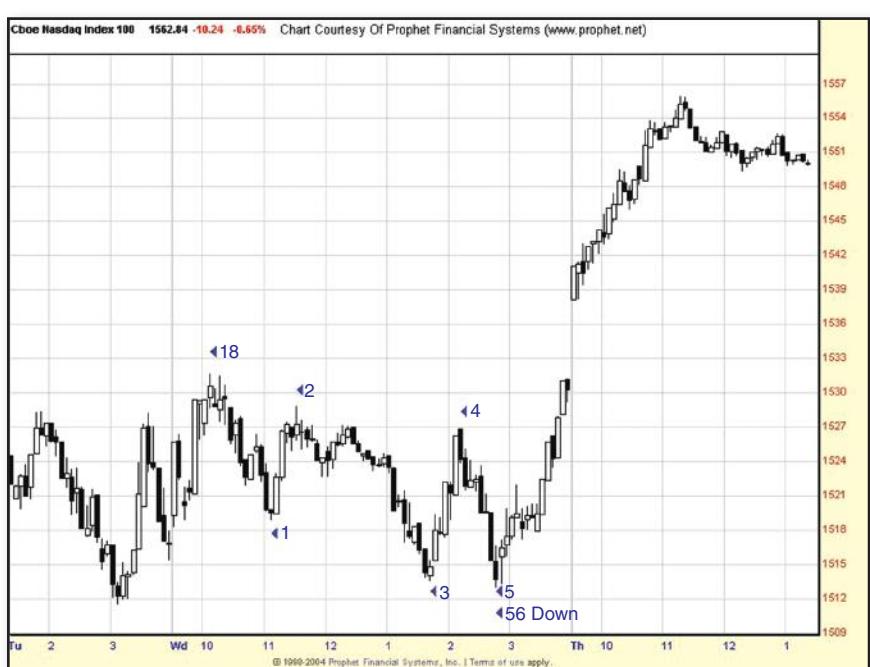
Finally, this correction ends on the 123 to 47 bar cluster in May. What follows is a nice looking morning star pattern.

What these two charts illustrate is a new concept to many of you. As you know there are many types of support and resistance. I'd like to introduce the concept of time resistance. On both charts, the failure at resistance does not hit on a common Fibonacci price level. This is confusing to the average Elliottian and Fibonacci analyst alike. In each case, the B wave up or reactionary retest leg fails on a Lucas high-to-high cycle. The bond chart fails on a 47-day high-to-high cycle and the XAU fails on a 76-day high-to-high cycle. I've highlighted the Fibonacci price retracement levels in the XAU case. Many times, a B wave will fail right on the level, but many times it won't. Here's why. It fails because time ran out. It's as simple as that. For whatever reason, which is likely an emotional reaction price action temporarily exceeded the 61 percent price area on the other hand. It didn't exceed it by much but enough to confuse traders who are looking specifically at the various retracement levels. Whatever the case we see charts that will go just beyond or fail just before the 61 percent level.

The point is the cluster of the two relationships. First the 21-day cycle up and ultimately the 76-day high-to-high round trip acts on the price action the

same way a moving average or Fibonacci retracement level would. Actually, it's better. These time clusters create invisible ceilings that are nearly impossible to take out. A good time cluster will hold for weeks and even months. In this case, this form of resistance at the 103 area holds for six months. This correction ends in May and it's not until the next leg up really gets going that this level is finally taken out. In the case of the bond chart that B-wave high formed in September 2005 and may hold for years.

We've already seen this chart, now called Figure 4.5, earlier as an exhibit of how a correction overlaps. This is also an excellent example of how a support area is confirmed. This example is the polar opposite of the Citigroup chart. Our low is put in near the close on Tuesday at the 1512 area. The action turns up in an 18-bar leg before we get that second- or B-wave correction. Look what happens in wave five. We have an eight-bar leg down that clusters with a 56 (Fibonacci 55+1) bar move to the downside. The fifth wave confirms the low or support line at 1512 a day earlier. The only problem I have with this chart is the candles off the low. In this time frame they don't look very good. However, since this is a five-minute chart,



**FIGURE 4.5** Fibonacci Non Impulse

if you scale up to the 15-minute time frame you will see a much better looking candle off the low.

Look what happens on the leg up. It gaps up at the point of former resistance. This is a very important concept. Nison calls this the polarity principle (201-208). The polarity principle simply means what was formerly resistance can turn into support or former support can turn into resistance. Why does this work? In this case it seems that the 1530 area is a point where many traders sold the bounce looking for prices to go lower. They actually had three chances to go short that day. Unfortunately for them, they shorted a corrective choppy wave, which was a big mistake. When three chances to short fail at the confirmation of support, by the time we got back to resistance, they all fled for the exits at the same time.

Here is an important concept about support and resistance lines. In this case, we don't know if support is going to break and actually there is a better chance it will hold based on the pattern. Many will be greedy and go short prematurely as we get to the support line. The best way to take a short in this case would be to wait for a candle to break through and close below support.

## ■ Polarity

Have you ever bought into a position and had it go against you and thought only if this thing ever got back to break even would you sell? Well, if a lot of other people did the same thing that could act as a polarity line. We are going to cover the polarity principle in much greater detail but keep in mind this will be one of most important trading patterns which lead to the biggest moves you'll ever have. We cover polarity here from various perspectives as you'll see as we go forward.

Figure 4.6 is a daily chart of the action in the NASDAQ from August 2004 into the early part of 2006 but also gives the weekly count. The January 2005 high at 2191 held for eight months. While it was taken out in August it did not hold. It was finally taken out on the next attempt in November 2005. The reason this chart is here is because of the retest. As you can see the line near 2200 acted as resistance for a whole year. It finally broke through to stay on the fourth try. But this line was retested in January 2006. As you can see, the pullback found support at the old January 2005 high. Almost as important is the rotation of the bars off the October low. Action turns up on a cluster of 56 days off the October pivot but also 18-bars down off that



**FIGURE 4.6** NASDAQ Polarity

early December high. As a very important support line was secured, price immediately exploded to the upside.

These two charts, Figure 4.7 and Figure 4.8, are excellent examples of how we combine polarity failure with the bearish rotation. The first chart



**FIGURE 4.7** Bonds 13-Week Polarity



**FIGURE 4.8 Bonds Daily Closeup**

shows us a 13-week high-to-high failure with the first leg down which is an excellent polarity flip. But as we scale down we see a 61-day high-to-high rotation, which puts the polarity failure into greater focus. If there is a problem with this chart it's the sixty-first bar is huge as it likely exhibits a short-covering bounce. This is not the perfect shorting opportunity so there are two adjustments that can be made. First of all one can scale down even further from the daily to an hourly to see if a good candle reversal formed. If not, you have to let it go right there and hope for a retest of the line which is more inviting. In this case it works out because there is a failure at the retest of polarity with the bearish engulfing bar on the right side. That bar may not be the best bearish rotation anymore but it doesn't matter because the dominant cycle at this point is the 61-day high to high, which confirms when the bearish engulfing kicks in. That's your best entry in this situation and it's an excellent condition as far as the time element is concerned because we have the 61-day lining up at 13 weeks. We have two time frames telling us the same thing. Also, we don't use the time rotation as the stand alone but use it to give us greater conviction at the resistance/polarity failure.

The other important support line is the October low itself. Check out the congestion band of action back in February and June 2005. While prices broke down one time leading into the April 2005 low, obviously they didn't stay there. The October low ended an 11-week downtrend in the near term but also an 89-week triangle since the January 2004 high.



**FIGURE 4.9** NASDAQ

A close-up of the same chart, in Figure 4.9, on a weekly basis shows some of the candle formations at the various turns. The August 2004 low completes a 29-week leg (top not shown) and in candle terms a morning star pattern with black candle down, bottoming candle with small real body and large white candle creating the reversal. The next leg up to the end of the year is a 21-week leg that reverses on a huge bearish engulfing bar. The first weekly bar of 2005 retraces the prior five weekly bars to the upside. The next two reversal formations don't exhibit classic candle reversals but they do put in tails in the right direction with bars that follow through.

The significance of the August 2005 high is the upper tail that confirms resistance of the January high. As you can see, this high doesn't line up with a real good time cluster. That could be a good reason why this high is eventually taken out.

The next example, in Figure 4.10, illustrates the polarity line as a zone as opposed to a line. The SOX spent five months testing the zone from 420 up to 445. It briefly broke below in January and April. Finally, along with the rest of the market, the SOX tested this band one more time before finding support. A small hammer on the daily bar reversed on the sixty-second day



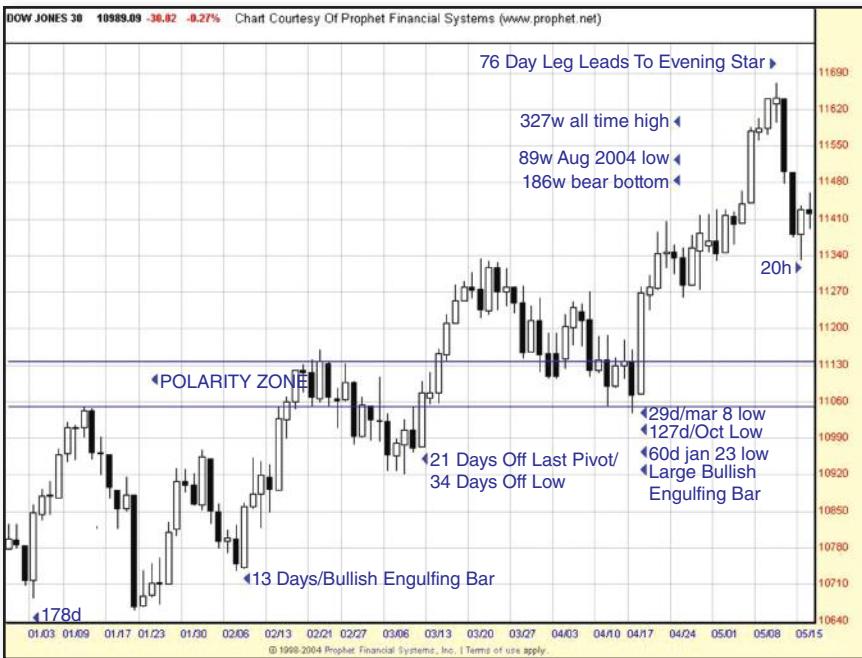
**FIGURE 4.10 SOX Polarity Zone**

80

CANDLESTICKS

of the correction and turned up for a more than 140 point move up to 560. While we can see the reversal on the sixty-second bar of the pullback, the April low is the one hundred sixty-second day of the trend and the October low is the two hundred eighty-ninth day of the trend. The difference is 127 days, and 1.27 is the square root of 1.618. All time bars are fair game for reversals. What we have in addition to all of the other relationships that lined up in October 2005 is a cluster of 127 days low to low and 62 days high to low. This is another example of how the time element creates important support. The SOX topped in January 2006 and hit an important low near 430. As of this writing, the October 2005 time cluster is still holding.

The next chart, Figure 4.11, comes very close to nailing all of the principles we've discussed up to this point. I've already shown you calculations that created the April to May turn in the SPX and NASDAQ. We haven't covered the Dow yet. Here is a Dow chart of the same time. Starting with the January low we have a bullish rotation that creates a better than textbook bullish engulfing white candle on the thirteenth bar of the move. These are the exact conditions you would be looking for in any time frame on any chart. The problem is the market doesn't always give this to you. As we've seen even in the charts up to this point we get some elements in place but



**FIGURE 4.11 Dow Polarity Cluster**

rarely all of them together in such an obviously fashion. I want you to see what perfect conditions look like so the next time you see it you'll recognize it for what it is and take advantage of it.

If you are looking for less than perfect but with many of the elements in place all you have to do is look at the very next pivot. As you can see, the next real nice looking white candle comes on the twenty-first day after the prior pivot and clusters as the thirty-fourth day off the low. The problem in this case, it does not represent the low which came a couple of days before at 10920. Why did it happen this way? I can't say for sure but this is the hand the market dealt. If you scaled this wave down on an intraday basis you'll likely see that white candle on the 21 to 34 bar is the start of a smaller-degree intraday third wave. The 19 to 32 bar which created that pivot low was a hammer. They tried to take prices down that day to retest a low. They broke the low briefly but could not hold it.

The next pivot was important for several reasons. In terms of the support/resistance equation price action was testing a potential polarity zone of highs made the week of January 11 and February 21. The low came right on the heels of the January high at 11060 area. In terms of our methodology we had

a time cluster that was 29 days from the March low, 60 days from the January low, and 127 days from the October low. The result of this triple cluster was a confirmation where former resistance turned into support in a very big way. The white candle that broke out shows a large bullish engulfing bar as it covered the previous six days' worth of action.

This cluster led to the final leg up. While this was going on as we've seen from the other charts was the time relationships on the weekly scale were becoming very mature. We've already seen the precision of how the NASDAQ topped on various cycles in April and the SPX in May. I keep track of many indices and while they don't all line up, they are close. The charts in this book are derived from my personal charts and you can see exactly where we were in Dow terms in relation to the January 2000 high, October 2002 low as well as the April 2005 low. We've already seen how the chart reacted to the October 2005 low.

By the time we got to the top, this particular leg was a Lucas 76 days up and the next day's black candle was the one hundred forty-fourth day off the October 2005 low. Obviously, there was no resistance line at this top. However, the Dow did react to a cluster of 76 days off the January and 144 days off the October low. In candle terms, the three bars at the top trace out a very good looking evening star pattern. We have a progression of white candle, high-wave candle with small real body at the top and black candle the next day, which completes the evening star reversal. For those of you who may be new to candlesticks, high-wave candles have small real bodies with tails on both sides. The implication is uncertainty or confusion on the part of buyers. Uncertainty is the enemy of rallies because bull phases in all degrees of trend require conviction on the part of buyers.

## ■ Double-Top Resistance

Do you recognize the next chart? Figure 4.12, NASDAQ Secondary Tops, is the famous formation that led to the second half of the bear. Check out the major resistance line created by the two evening star patterns. The second evening star was a failure at a very important resistance line. It was also a cluster of two important time relationships. The first one is apparent on this close-up as a 34-day high-to-high cycle. More importantly, 122 days off a very important top. The drop commences on Lucas day 123.

As you look at this close-up it really does not differentiate itself from any of the other charts we've looked at in this chapter, does it? We have the waves,

resistance lines, candles, and appropriate time relationships. I would consider Mark Douglas to be the best trading coach in the world. He is an expert at trading psychology. His books discuss how to turn yourself into a winning trader from a losing one and if you are already profitable, how to become more profitable. One of the most important factors in succeeding at trading is not assuming too much. He calls it *The Uncertainty Principle*. Did you know it's possible to know "too much"? Of course, you want to have a methodology you can trust. This book is giving you the best pattern recognition in the world. If you've noticed in these examples some setups are better than others. The markets don't always give us the perfect setup. Sometimes all you need is a decent setup. However, Douglas stresses you don't want paralysis by analysis. You want to have an idea of what comes next, that allows you to enter a trade in the first place. Contrary to popular opinion, Douglas says you'll be more profitable if "you don't know what comes next." What he's getting at is, know it alls don't make money trading. By entering the market with an approach that anything can happen, we give up our control and need to be right all the time. When we come to a place where we don't need to be right all of the time, then getting stopped out doesn't hurt us as much. We can actually get into a flow state and interpret what the market is telling us as opposed to imposing our will on the market (88-93).



**FIGURE 4.12** NASDAQ Secondary Tops



**FIGURE 4.13** Historic Bear

Why am I indulging this trading psychology discussion right here? By now you've probably already figured out the preceding chart is not like the others in this chapter. It only looks like a garden-variety resistance line. Look at the next chart, as it is the big picture view of the situation above.

What you are looking at in Figure 4.13 is one of the all-time great bear third or C waves in the history of the stock market. You are looking at the bear market crash and popping of the NASDAQ Internet bubble. What is important to gather from this chart is nobody really knew it would go from the 4300s down to 1100, but it did. If you didn't take the approach that anything could happen, there is no way you would have been able to participate in such a trade.

I'm not saying you couldn't get into the move, but most people who assumed they knew what was going to happen were long and 90 percent of the people ended up giving back 90 percent of their profits. However, looking at it from the perspective of Labor Day 2000 all you really had was a failure at an important resistance line with classic candlestick formations. Assuming you were armed with this sort of information you would have gone short. Sometimes we do get lucky and that's why we are supposed to let our winners run.

Following through on our discussion of time resistance we see this chart failed both times just short of the 61 percent retracement level of the entire first leg down. Now you can see what I mean about good setups but not perfect ones. If you were going to wait for the price action to nail the 61 percent line you would have missed two very low risk-reward entry positions. Go back to the close-up and you'll see every other element was in place. The first high fails on the 88 day high-to-high cycle (Fibonacci 89-1) with the all-time high in the NASDAQ. The next one on the 34 to 122 Lucas cycle. When price action fails just short of a key Fibonacci price retracement but turns on a Fibonacci-time cycle we call it time resistance.

Finally, time resistance works the other way as well. Look at the first leg low near 3000. It completes in 53 days. The number 53 is not a Fibonacci or Lucas number. What I've found in this research is when a leg completes without the benefit of a good time relationship; it is likely to be taken out down the road. We've seen many examples in this chapter of resistance of support and resistance lines that have held and the main reason for it is the turn came on a good cluster of relationships. This is not an iron law or rule but rather a guideline to keep in the back of your mind at all times.

This chapter by no means is a comprehensive guide on candlesticks. I think you now have good working examples in all degrees of trend that will enable you to recognize:

1. Key support and resistance zones.
2. Most important candle reversal lines.
3. How support turns into resistance or the opposite via the polarity principle.
4. How to combine this discipline with the time factor.

You now know enough to recognize many favorable high-probability setups you can use to your advantage. But there's more. We can still eliminate many mediocre setups and the stop outs that go with them. In order to get really good reversals we need to be able to recognize when a trend matures. A trend can mature in any degree. A one-minute trend will find maturity in 34 minutes. Any trend will have magic bullets that are its kiss of death. As we've seen to this point, some of the bullets are the wave count, the time count and a good candle reversal pattern. The next bullet may be the most important one as it implies the trend may not be pulling back for a short correction, but a larger-degree change.



# Divergences

**I**t was the original intent of this chapter to help the multitudes of traders who use very common indicators such as moving average convergence divergence (MACD) not to get into the habit of picking tops or bottoms based on the indicator alone. The inspiration for this chapter was the old bull market, which extended beyond what most people would expect. Some of us have to find out the hard way that a market can stay extreme longer than we have money to ride it out. This chapter is the first defense against people picking tops or bottoms based on lagging indicators. Since this book was originally published I have moved away from using lagging indicators such as MACD at all. I don't use them anymore. But I realize that many people do and are going to continue to use them no matter what anyone says. Appel created an excellent indicator to give people an idea of when a market is coming to an extreme. But we are going to give you the choice of deciding for yourself about whether you want to continue using lagging indicators or slowly start to wean yourself off them. So we are going to start slowly, but as you'll see there will be an evolution of moving from the lagging indicator to using none at all.

Markets can and will stay extended for long periods of time. We know now what we didn't know back in 2006. We know that optimism and euphoria went to historic extremes before the bull market ended in October 2007. So there are few things worse than getting stopped out prematurely picking major turns in the market.

Each year some hot-shot rookie with every athletic and physical gift is drafted to play quarterback in the National Football League. Every team

carries three quarterbacks and with the 32 teams there are only 96 jobs available in the whole country. If you consider the turnover, there are probably less than 50 openings when training camps open every summer. As there are thousands of high schools and hundreds of colleges the probabilities are mighty slim of anyone beating the odds by choosing a career path as a quarterback and actually making an NFL roster. Even the very best who do get drafted have a severe learning curve from the college ranks to the pros.

Compared to the college ranks, NFL players are bigger, faster, and smarter. NFL defenses are very complex and the game speed is the biggest adjustment for a rookie quarterback. Many of you have watched NFL games for years. What is the biggest crime a quarterback can commit? It's the interceptions, isn't it? The ones that throw too many interceptions compared to touchdown passes don't last very long, do they? For those of you who aren't familiar with American football, an interception is when the quarterback throws the ball to the other team. Nothing upsets coaches and fans more than a stumbling and bumbling passer.

It's rare for a rookie to come into the league knowing exactly what to do and when to do it. Even the best quarterbacks are plagued with high interception ratios early in their careers. The ones that make it mature over time. In their maturity curve they learn not to force situations and take what the defense gives them. If all of the receivers are covered, they are taught to throw the ball out of bounds. How do they mature? They develop patience, *patience*. It is my contention that every time you get stopped out by prematurely picking a top or bottom, it's the equivalent of a quarterback throwing an interception. Throw too many and you'll lose confidence. In football the quarterback loses his job. In trading you lose your bankroll. Some price patterns are as complicated as NFL defensive schemes, and coaches game plan over and over to beat those defenses. So one needs a game plan in order to compete and catch turns successfully if that's what you want to do. I wouldn't attempt to fly a plane without training and you shouldn't attempt to trade without training. But many quarterbacks are good enough to make NFL rosters, just not good enough to stick. By the same token, anyone with a bankroll can attempt trading. But having a bankroll doesn't make one a trader and anyone good enough to hang in there for a while may be good enough to participate in the game. However, participating isn't good enough. You have to be able to stick around long enough to overcome your mistakes to be profitable.

For quarterbacks this is reducing their interception ratio. For traders this is reducing the stop-out ratio. Don't get me wrong—profitable traders will get stopped out a lot in the best of circumstances. If you don't swing you'll never connect. What we want to do is eliminate the dumb mistakes that bleed the bankroll.

One of the biggest mistakes traders make is prematurely picking tops and bottoms. This chapter is designed to cut down on the number of times you will get stopped out because you prematurely went against the trend. There are several magic bullets that will kill a trend in any time frame. One of those would be a complete five-wave sequence. The trick is, how do you differentiate the top of the third from the top of the fifth wave?

A good way other than the time factor to confirm a wave count is by use of traditional momentum indicators. The best one is the MACD, which is moving average convergence divergence. You can get the exact definition of the MACD elsewhere but what you need to know is when the MACD line crosses over the signal line in either direction you have a potential buy or sell signal. The best use of the MACD is to track the prevailing trend. When the MACD keeps pace with price action the trend is intact. When price action makes a new relative price extreme (high or low) for the move but the MACD does not, we have the potential for a trend change. The MACD confirms the waves because it tracks price action up to the top of the third wave. By the time we are hitting a fifth wave, the MACD will not confirm and that is our recognition the trend is losing steam.

The problem many traders have is they mistake a divergence in the MACD for a sell signal around tops and buy signal around bottoms. This is just not the case. Momentum divergences can and do persist for days and possibly weeks. Traders can and do lose significant portions of their bankrolls waiting for the trend to finally change.

What the time factor will do is prevent you from prematurely picking tops or bottoms. What happens is the traditional overbought or oversold indicators such as MACD will persist until the time factor kicks in. When we have a significant time cluster, the chart finally turns. It's almost as if the price chart is an NFL game. There are significant twists and turns in a game but the action keeps going until the final gun. Once the gun sounds, time is up and the game is over. In financial markets, once cycles line up and expire, the trend is over.

## ■ Divergences Can Persist

Our first example is the Biotech Holders Trust (BBH) daily chart in Figure 5.1. We have a complete five-wave sequence from November 2004 to November 2005. The waves are clearly labeled and you can make out the five-wave impulse very easily first on the daily and ultimately the weekly. Follow the MACD closely. It tracks the rally all the way up to the August peak. While there is a smaller negative divergence that does lead to a 10 percent decline from the September peak, the important point here is the final leg up. The divergence you see on the September peak is a lower-probability occurrence. Still, that peak tops on the one hundred twenty-seventh day of the move off the March low. The chart traces out a sharp rally off the October low, which looks like a third wave but ends up being a blow off fifth wave top as the MACD never confirms the new price high. The fifth wave is 28 days in duration and 178 days off the second wave low in March. Mostly importantly to this sequence is the 55-week window where it peaks which you can see on the weekly which is Figure 5.2.



**FIGURE 5.1** Bearish Divergence



**FIGURE 5.2 BBH Weekly**

Since this chart does sport two negative divergences, you could have taken a short on the 127 bar because there was a negative divergence and probably was a negative divergence on an hourly time frame. It's an aggressive play. Later in the chapter I'm going to show you strategies you can use if you don't like picking a top that still uses the same information as part of our evolution.

When there is a major turn in the market like there was in 2007 and strong time windows line up, it does present an excellent and even rare trading opportunity. The first edition outlined these turns as opportunities but didn't really stress exactly how to specifically exploit and enter when these chances materialized. I should stress the first leg of any move is the first or A wave and doesn't go very far. What I've found from coaching traders all over the world (especially those who are not full time) is they'll see a big reversal candle at the end of the day and put in an order when the pattern is already at a near term extreme. In the case of the SPX on May 11, 2006, the SPX bar had a high of 1322.63 and low of 1303.45 with a close near 1306. The bar was already extended and at that point was already ripe for a bounce retest of the high. It does a trader no good to short a bar that is already at an extreme. The first leg is generally the smallest of the moves and if one finds themselves constantly getting in on the latter stages of the first move they'll be in the unenviable position of having to sit through a second- or B-wave retracement where they may end up underwater. So while the most aggressive of you might have surgical precision in fast markets, the vast

majority of traders should not be that aggressive. Better to take the information and look for a higher-probability entry on a scaled down intraday chart.

Let's say you are right about picking the top or bottom five or six times out of 10, you'll still be wrong about 40 percent of the time. If the first leg doesn't run and you find yourself making up for the losses of when you got stopped out, is it any wonder why it's so tough to get ahead consistently in trading? The idea is to set yourself up for the bigger moves which allow winners to run. In that light, you set yourself up to finally get ahead of your stop-out losses and show a consistent profit. So it's much better to take the time window information, see that it validates to a degree and then scale down for your own micro trading opportunity.

The next chart, in Figure 5.3, illustrates just how long a divergence can persist. Momentum on this weekly SPX chart peaked in December 2004. The high was taken out in July and August of 2005. While there was a correction into October 2005, the divergence persisted until May 2006 which accounted for 80 SPX points.

Since this was a big divergence on a weekly time scale we had to wait a long time for the cycles to catch up with the MACD. Finally, a confluence of



**FIGURE 5.3** SPX Weekly

weekly cycles caught up to the SPX as the triple cluster of relationships all the way back to August 2004 enabled traders to cash in on the larger-degree turn.

There are a couple of other concepts to introduce here and I've included stochastic (slow 15, 3) in the discussion. Some traders consider a MACD crossover of the signal lines to be a buy or sell signal. Others look for the oscillation of stochastic from oversold/overbought with the red line crossover the sell/buy signal. This method works but not enough of the time to keep the stop-out ratio low. What I recommend is to combine either the MACD or stochastic crossover with the time factor. On the weekly chart this strategy would be helpful to those who have a longer time frame such as mutual fund players. In this case we have three instances of MACD and/or stochastic buy crossovers. Each one is a pivot we've covered extensively in this book. The August 2004, April 2005, and October 2005 buy crossovers all have excellent time relationships. We haven't spent any time on moving averages yet, but the 20-period exponential moving average (see chart key in top left corner) has been added to this chart. You can clearly compare and contrast it to the nine-period moving average. In a strongly trending market, the 20-period moving average keeps you on the right side of the trade so you wouldn't attempt to short it too early. In this case we have the exponential average, but a simple moving average wouldn't have yielded different results.

This example illustrates how the time factor is supported by the institutional trading community. They just don't realize it. You are in a position to see how they reacted when the time windows expire. They sell in droves. They don't even know why they do it, but they do it. Prechter explains that crowds will act unconsciously according to the herding principle when the pattern looks right, but part of the pattern looking right is also when it feels right. It feels right when the proper amount of time expires.

## ■ Use Time Windows to Help with Divergences

The simple fact is by using the time factor you can get an edge on the institutional crowd. You can track these bars and if you were watching this chart in real time you would have scaled down to a daily or hourly time frame to get a better price. Keep in mind the big money players don't have the flexibility of individual traders. We are working with leading indicators and you have the flexibility to get in and out. I've introduced the moving average concept

as another way to stay away from pulling the trigger on the divergence too soon. Those of you in the Elliott/Fibonacci community pay little attention to moving averages and that may help you occasionally. Those of you who follow moving averages religiously and are learning about universal time principles for the first time should strongly consider them as part of your macro game plan. Use them side by side with your indicators and see when the turn materializes. The challenge for you will be when to get a jump start on the reversal. Instead of waiting until price action falls below the moving average to exit a position, you will be able to recognize the timing model as a leading indicator.

A similar chart, in Figure 5.4, is the Dow daily covering the last six months of the rally into May 2006. We covered the finer details in the prior chapter but here you can see how the bearish divergence in the MACD persisted since November 2005! In this case, you can see how pattern recognition via the timing model works with the moving averages in a choppier environment. A 20-period moving average didn't contain the dips so easily (in this case the exponential average is shown, but the simple average yielded similar results). The 50-day moving average (dma)



**FIGURE 5.4** Dow Daily

contained the rally with few exceptions. But in a period of a long-standing bearish divergence, the combination of the candlesticks combined with the time bars gives you an idea of market precision.

The preceding two examples give you an idea of how long a divergence can persist and why the chart finally turns over. Armed with this game plan you can start to develop patience and confidence not to give into the crowd psychology you see on television. This example works in all time frames. Keep in mind that while all of this was developing a new bull market was in place. By the time April and May 2006 rolled around, sentiment was incredibly euphoric and by the time all of the time windows expired the market reached a zenith where on one day everyone finally was convinced the only way the market could go was up. As we discussed earlier, that's usually the top.

The next chart, in Figure 5.5, is the 2006 correction leg in the XAU. There are many time relationships hidden on this chart but I'm going to stick with the topic of divergences here for simplicity.

Bearish momentum peaks on the first wave down. As in prior examples, most notably the big NASDAQ bear, the leg does not complete in the correct number of hours, which is the clue there is more to the move at some



**FIGURE 5.5** XAU Hourly

point down the road. Recall the NASDAQ bear's first leg was 53 days. This time we are looking at 49 hours. Keep in mind this is a high-probability tendency, not an iron law. The correction- or B-wave up after that 49-hour wave, which can almost be considered a triangle, confirms in 35 hours.

From the 84-hour mark we ultimately find a cluster at the bottom of 159 to 75 hours. The implication is the downtrend runs out of gas and turns up right at the start of the 160 to 62-hour window as well in the seventy-sixth hour off the secondary high. In this case the 20-period moving average does a good job containing the move when the market is trending strongly. At the bottom when we get the time cluster you will come to realize why the divergence is about to kick in. You'll also have advance notice the moving averages are not going to contain the downturn anymore.

I do intraday forecasting and the most common email is people wanting to know when the top is going to kick in. There is a tendency among intraday traders to want to fight the trend and go the other way either for a pullback or a spike. Intraday forecasting or trading offers an added challenge that is not a major factor on the daily charts. Since we are only dealing with one day, the odds are once the die is cast, it won't change for that day. What usually happens is the public will place their trades on the open based on some emotional news story. Roughly 45 minutes to an hour into the day the trend will reverse. When it does, that's usually the direction for the rest of the day. Why does this happen? Trends will usually die out in the first hour because they are a spillover from the prior day. That's why when we get some news event such as employment data or inflation the expectation is a continuation of the day or days leading up to the event because it is also a spillover from a very strong week. Let's say we've been rallying for a whole week. Come Friday, they release a good jobs data report in the premarket activity. As expected the reaction is positive. The futures spikes straight up and carries over into the open. The public buys up the good news. Unfortunately for them, this is usually the top. Within the hour we are going south. The largest reason for the change of direction is that we've come to an important intraday turn window, which may or may not cluster with the larger daily count.

The point here is not to get into a discussion about news events but once we get the turn after the first hour, we've likely set the tone for the entire day. Once we've set the tone for the entire day, there is no use in fighting the trend. At that point, it's best to go with the flow until we see the divergence developing. To see a divergence, first we need a leg to develop. This leg is a continuation of the trend, which is the intraday third wave. This leg usually goes beyond what people expect. Finally we'll get a small pause or



**FIGURE 5.6** Dow E-mini

consolidation. Then there is a continuation in the same direction. Once we take out the high we can start looking for divergences that tell us the trend is getting tired. As we've discussed above, divergences will persist. At that point we have to wait for an intraday turn window before that divergence will cash in.

I will now take you through a series of intraday examples. If you only follow this discipline you will save yourself hundreds if not thousands of dollars in needless stop outs. Not only that, you will sidestep the emotional frustration and aggravation that goes with it.

Figure 5.6 is a 15-minute chart of the Dow E-mini over the course of seven trading sessions. While it's not a rule, check out the two major highs on the chart. Both occurred shortly after the open, didn't they? I don't recall the exact news event, but this sort of condition happens quite often. Study the progression from the low. On the intraday basis we have a series of advances followed by a series of small pullbacks and finally a small-degree high in the middle of Thursday. This pullback doesn't last and we go parabolic to the upside. After the shot to the moon, notice how the MACD is still in line with price action. This chart turns on the sixty-third

bar, which barely misses our 62-bar window. One of the challenges to technicians, forecasters, and traders alike is determining if a high is the end of the trend. While the 62-bar window is a good place for an intraday pullback wave, the fact that we don't have a divergence yet is our clue the larger trend is not over. We also need to pay attention to the candles. We can hit that 62-bar window but if the candles don't respect it, we won't get the change in direction. Take note that when we hit a high-probability time bar, we are also going to come back to the moving averages. Those of you who are really aggressive may find these excellent points on the chart for quick scalps or hit-and-run trades.

This particular pullback doesn't give us a real nice cluster but it does complete on the one hundred twenty-seventh bar off the low. I can't stress enough the importance of the 127-bar window. In this case the pullback completes and we start another progression that takes out the prior high. We put in a lower tail on the candle. The difference this time is MACD does not line up with price action. When MACD does not line up with price action you can be sure of a reversal 100 percent of the time. Here is where you finally put the odds in your favor. The only challenge is *when*? Here is where the patience needs to kick in.

On intraday charts we need to make one adjustment as opposed to daily time frames. On intraday divergences we don't always get that beautiful cluster you witnessed on the daily scale. The reason being is we are dealing with waves from a daily degree of trend scaled down to the intraday degree. There are different degrees of trend. If we are only coming to the top of a larger third wave we might not get that big cluster. For instance in this case, we top on a daily scale of seven days, good enough. The final leg is 62 bars, which is very good. However, the bar count from low to high adds to the cluster, which is sacred geometric 190, the same as 1.90.

I don't want this to get confusing so let's make this concept very simple. Once we've already hit a high, pull back and shoot for the fresh high, pay more attention to the individual count of the final wave. That is where the divergence is going to confirm. If we are lucky enough to get the daily count lining up with the low-to-high intraday count and the final wave, then chances are we have a larger-degree turn in the works. Also, not to be understated are the candlestick lines. In this case, at bar 191 we have a very nice-looking bearish engulfing reversal pattern. What that means in simple terms is you might get the 62-bar high and it may not make sense in the larger count. In this case 190 is good, but we recognize the 62 bars as being more significant.



**FIGURE 5.7** Dow 15 Minute

The next chart, in Figure 5.7, is another leg from the same larger trend in the Dow. The bars that have numbers below not annotated with a 15-minute label are the underlying five-minute markers. For instance, where the second wave completes on 26 fifteen-minute bars, we also have a cluster of 75 five-minute bars and the larger move takes off on the seventy-sixth (Lucas) bar. There is also a bullish piercing candle. In any event, the first high is near the close on Thursday. We continue higher after a short pullback but MACD does not follow the price action. This high, which also happens in the first hour of trading, kicks in on 113 fifteen-minute bars but also a 47-bar high-to-high cycle. It's not annotated, but that last choppy leg is 29 bars up. Look at the candles; we have a couple of high wave (small real body with tails on both sides) candles.

This principle is exhibited here as the pullback ends on the one hundred thirty-fourth bar off the low, but it also clusters with the previous high to create a 21-bar pullback (bars 113-134). Bar 134 is also one off Gann geometric 135. The best way to buy a pullback in terms of time relationships is to get a cluster of at least two time relationships and have it confirmed by



**FIGURE 5.8** Crude Oil

a candle reversal formation. Here it's that bullish piercing formation. I'm being repetitive but these are high-probability setups you should treat like gold. The final leg takes out the previous high on a 62-bar leg where the bearish divergence kicks in. At the top the final bars take the form of an upper tail followed by another high-wave candle.

The next example, in Figure 5.8, is a B wave in the larger correction of crude oil in the first half of 2006. The first leg up completes in 33 bars, a common relationship. The low is created in the 17- to 19-bar window. Once again, moving average players will have advance notice the moving average lines won't hold in the near term.

What we are doing here is playing the probabilities and to a lesser degree, things will go against us. In this case we get a higher high (the middle high) on the sixty-seventh bar of a high-to-high cycle, which doesn't have any other relationships going for it. This middle high is taken out one more time even though there is a bearish divergence working and this time the high comes in on the one hundred sixty-second bar of the sequence. This 162 bar clusters with the final 21 bars to create a nice looking high. The takeaway is the 162 bar is most important and certainly more meaningful than the 67 bar. Check out the next chart to see what happens next.



**FIGURE 5.9 Larger Crude Oil Condition**

Figure 5.9 shows the entire sequence of events as well as the final touches of the A-wave down along with the start of the C-wave progression. The low finally hit at 68.75 a couple of days later, which is not shown.

What is our other clue this is just a B-wave 162-bar move up in a larger move to the downside? We've covered this elsewhere but this chart exhibits five overlapping waves to the upside. The fourth wave down violates well into the price territory of the first wave up. As a matter of fact, check out that first wave up. See the gap up at 71? Check out where price action in wave four ends. Right near 71, doesn't it? You can also see other instances on the chart where spikes or pullbacks complete just in the price territory of other gaps, thus confirming what we discussed in the chapter on support and resistance lines.

This isn't a book about Forex, but the next example in Figure 5.10, is of the U.S. dollar chart. The dollar chart offers the exact same principles as many Forex charts and has a good correlation to the USD/JPY chart.

In this case we have a five-wave progression to the downside. We have a shallow first leg that tops on a 23-hour high-to-high cycle. Note the large black candle; it's the thirty-fourth bar in the sequence. This time bar supersedes all moving averages. The third wave itself is 21 hours in duration. The



**FIGURE 5.10 Five-Wave U.S. Dollar**

fourth wave up completes in 26 hours of a high-to-high cycle off the last major pivot at the top of wave two. More important however is the polarity line it creates as former support on the way up now becomes resistance. The combination of the time sequence and polarity is the sign the leg could be at a peak. Once we have the fourth wave high and take out the prior low we start watching for a sign that MACD is not confirming the new low. This is our cue for a potential reversal and finally the 61-bar cycle kicks in. That would be the signal of at least a chance to take an intraday trade as in this case the price action is going to have to retest the polarity line. Note that on an hourly basis at least, we don't have a good candle reversal bar to go along with the divergence or number bar. As we get to the next chart you will see a gap up which confirms the 61-hour cycle. This is only an hourly chart and a move of 75 pips is not bad in terms of Forex trading, but we can't assume a major reversal yet in this case.

Look at the progression on the next chart in Figure 5.11. We did get our drift up to test the polarity line. We did much better than that. The chart gaps up, clears through intraday resistance, and goes all the way up to 86. The move is over \$1.50 and I think most Forex traders would be



**FIGURE 5.11** 61 Percent Retracement

happy with that. The leg up has gone all the way to retest the next level of resistance, which is the 61 percent price retracement of the 61-hour leg down.

This progression illustrates that it is possible to catch a divergence perfectly with the benefit of a good candlestick reversal pattern. I don't want to send mixed messages here. It doesn't happen all of the time, but you should be aware of when something looks exceptional so you can see what doesn't. Some setups are obviously going to be better than others. In this case while the hourly bar doesn't give you a classic reversal, it's the gap up and retest that refuses to break lower, which is your sign that a low is in place.

I realize many of you don't trade the indices and you'd like to see how this principle works on stocks. This divergence principle is so important we can't overkill it with too many examples. The next two charts highlight a progression from Halliburton (HAL).

The first chart, in Figure 5.12, shows a seven point (68-75) bullish progression on a fifteen-minute basis. This chart highlights many of the principles we've applied to the indices. We can make an argument for a five-wave progression but also some of you can make a case for a seven



**FIGURE 5.12 Five-Wave HAL**

wave progression. Does it really matter? Using our principle of setting up for the largest move in the sequence we see this chart ends the retest of the low on the twentieth to twenty-first bar, which also creates a higher low. In this case, we go from 70 to 73 in less than one day. Of course, we didn't know it would gap up, but the entry on bar 20 to 21 would have put you in this trade in plenty of time.

You can easily see the best part of the move ends around the 73 area on the way up where the bearish divergence kicks in. While bar 46 offers you a chance in and is also supported by the 20-period moving average to get a couple of points, you need to be careful. When we make a new price high, the MACD does not confirm. It reverses, at least temporarily on the fifty-fifth bar of the move. If you went short there, you either ended up with a small gain or if you held ended up getting stopped out. We don't live in a perfect world. Finally, it turns up yet one more time as the final leg tops on the seventeenth bar (Lucas 18-1) as well, just missing the 79-bar window by one. The 79-bar window just expires as the eightieth bar creates a spike right on the open but drops from there. The eightieth bar is a better bearish engulfing formation than the harami back at bar 55. The action

with the tail at bar 80 confirms the 55-bar area as key resistance. The next chart shows you what kind of a nice shorting opportunity this divergence does create.

Notice how we topped right near the close? The move down exhibits no less than three bullish divergences along the way. The new trend rolls over at 75 and hits a temporary low near 71 on Monday. The next day we take out that low, setting up a small-degree bullish divergence. If you were watching this chart in real time what you would have seen is once the low at 71 is eclipsed, MACD in not even close to the reading of -0.6 registered on Monday. It reverses on the fifty-fourth bar of the sequence, which the more aggressive of you would take as a scalp trade. It tops once again on the seventy-sixth bar (Lucas Wave) of the pattern.

In Figure 5.13, action spikes up and reverses on the one hundred sixtieth bar of the trend and makes its final descent, but to help you it's also in the area of prior resistance. When we get to resistance, it's an area of supply and you need to allow the bears the default chance to take it down and the more aggressive bears will join in. If bears can't take it down, the bullish move will resume but when we get to the cluster of the time bar, resistance, and candle reversal it becomes a higher-probability play. What about the bullish divergence? It's going to turn up at some point but we just don't know when. The more aggressive will stay short. Those of you who are more conservative are likely to stay short only for a scalping or intraday basis. While this pattern makes a new price extreme, at no time does MACD ever take out the A-wave low on Tuesday. In this case we have a lingering divergence which confirms on the following Tuesday when the low is taken out. The rest of you would wait for the time bar to kick in and clean out the divergence to go long. The next low is taken out at the end on Wednesday with another bullish divergence. The whole move is 201 bars, which narrowly misses a Lucas 199 but does turn for the entire second thrust down on the 126 to 127 window (shared bar at 76).

You can see the same principles work for the indices and currencies as well as individual stocks. The only adjustments that are made are on the intraday scale where we count the individual bars of the final leg to the sequence. By the way, this chart proceeds to take out the prior high seen a week earlier at 75, which is not shown here.

As discussed in an earlier section, the truest form of understanding internals of the market is using one-minute charts. There isn't a faster way to make money in the whole industry and it suits those of you who demand



**FIGURE 5.13** Massive Divergence

instant gratification. In choppy environments, a day's worth of action can give you complete bull or bear markets.

The following progression of the one-minute Dow E-mini, shown in Figure 5.14, does not give you a big divergence but exhibits a new price high where the MACD basically just levels off. As you can see, the one-minute world is not very different from the other time frames. These one-minute charts give you a good idea of market precision but the moving averages will be hit or miss. The MACD divergences, however are right on the money. The second leg clusters on a 23-minute low-to-low cycle with an 11- to 13-minute correction. The third wave high is 47 minutes off the low. As we take out that high it becomes apparent MACD isn't going along for the ride. The final leg is 18 minutes up and it does cluster with 79 minutes for the entire move.

We have another one minute Dow E-mini with a true divergence as opposed to just a leveling off. In this instance there is a double bottom at 11065 that starts the move. This double bottom has its own bullish divergence to start near 9:00 A.M. When you see a double top/bottom there is a good chance to get a nice move in that particular time frame.



**FIGURE 5.14 YM One Minute**

This chart (Figure 5.15) also exhibits many of the characteristics we've discussed. We have a 21-minute low-to-low cycle off the second tail of the double bottom. The white candle is our signal the move is about to go higher. The white candle also clusters because the turn is also 13 minutes down. You can't take the candles as seriously on a one-minute chart as the larger time frames but they still work. This sequence finally comes to an end when we get a nice looking doji bar as part of an evening star as MACD does not confirm the higher high. Once again in terms of supply the bears get their chance as a result of the candle formation. This final leg does not cluster as nicely as the prior chart but it still reverses after 11 minutes.

Notice on both of these one-minute charts how price action reacts to the Bollinger bands. The one-minute cycle, in Figure 5.15, progresses from one end of the bands to the other and when it punctures the band it reverts back to the mean. When it punctures the bands on a time bar we have a very good chance for a reversal.

The next chart, in Figure 5.16, of the Dow E-mini highlights the challenges we've discussed throughout this chapter. For any particular day, once a trend starts rolling it is not wise to go against it. In a strongly trending day,



**FIGURE 5.15 Bollinger Compatible**

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**FIGURE 5.16 Dow One-Way Market**

there will not even be a good divergence on the one-minute chart. If there is going to be a turn, the first divergence that will show up will be on the one minute basis. If you are looking for a reversal and want to see one show up at least on the five-minute scale, it's wise to see if one is developing on the one-minute scale first. If it isn't, it's best to just go with the flow.

In this case we have a down trend that lasts almost four hours. Just like other charts, we have a chart that has its fair share of good time relationships. We've started using moving averages as part of the pattern-recognition scheme in this chapter. At least on the one-minute basis, the nine-period moving average seems to work best and due to the choppy nature of this time frame moving averages are not very reliable unless we get into a strongly trending leg. The first progression is a 21-minute wave, which is followed by a 47-minute correction. The 47-minute high bar reverses on a good evening star or bearish engulfing bar. This is a good failure at resistance and starts a nice 80-point drop. Along the way we have another 46-minute high-to-high failure cycle which clusters with a 26-minute correction.

Another concept that is a tendency but not a fast and hard rule is the relationship between corrective waves within the larger trend. I don't pay a lot of attention to it simply because it creates too much thinking. We don't want to have too much thinking as this creates paralysis by analysis but if it's there you have another piece to the puzzle that allows for a high-probability trade. In this case we have 47-minute and 26-minute corrective waves. Do the math and you'll find 26 is 55 percent of 47. One retracement leg is a Fibonacci relationship of another. It takes only a few seconds to punch a couple of buttons on a calculator. I wouldn't avoid taking the trade if a relationship isn't there, but if the bars line up and the corrections have a Lucas or Fibonacci relationship to each other you have a high-probability winner.

As we continue south with this leg bearish momentum peaks just past 2:00 P.M. when we get our last retracement up leg. We finally get a divergence after 3:00 P.M. as we take out the low but MACD does not confirm. The whole leg ends when the final wave totals 29 minutes.

What do you think the bias would be for the next trading day? Chances are the next morning sentiment will be really negative, as the dumb money would anticipate a continuation of the trend. I'm not suggesting to you that trends change from one day to the next. They don't. However, when we finally get divergences on a one-minute chart the way we just did, odds are we get at least a continuation in the opposite direction for a good portion of the next trading day. What did happen the next day? For that answer, check

out the chart above this one with the double low at 11065. The next day was choppy and at least half the session was a retracement back up to 11100. From 11100, price action did collapse one more time taking out the low, but rebounded to 11135 in one of those roller-coaster type days to almost totally retrace the wave down.

The MACD is a very good momentum indicator but by no means the only one. You can apply the same principles to stochastic, true strength, or RSI.

A discussion on divergences wouldn't be complete without mentioning when you shouldn't expect to see them. Momentum indicators measure the strength of the trend to various degrees. It would only be common sense to realize they work in trending markets. If we are not in a trending market, we shouldn't expect to see divergences. We've covered sideways markets here and the only time you shouldn't expect a divergence is in a sideways market. When we have a sideways market we are going to rely more closely on the bar count of individual waves as well as the high-to-high or low-to-low progression which is also the support/resistance lines.

If you don't like sideways markets, the solution is to shorten your timeframe. You can always find a bull or bear market even when the market is going sideways. If you scale down to a one-minute chart you will almost always have divergences to tell you when a trend (even if it is only 21 minutes) is going to change.

As you can see, the best way to avoid acting prematurely is to wait for those divergences to play out. The other consideration is to recognize moving averages and as long as price action is trading above the moving average don't think about going short unless you get a good time cluster. Think of yourself as a quarterback with stop outs being the equivalent of throwing an interception. The best quarterbacks will still throw interceptions. They do keep them to a minimum. In the NFL, quarterbacks are taught to throw the ball to the sidelines if the receivers are not open. Here I'm advocating you stay on the sidelines until such time as a setup that replicates what you've seen here materializes.

It takes patience to wait out a trend; especially the later stages when the bars appear to labor higher and you think you've caught a top or bottom. From my own experience nothing bleeds an account more than being quick on the trigger. Trends last longer than most of us realize.

As I said at the top, many traders use the momentum indicators because that's how they were trained, most software packages carry them, and if you are disciplined and patient they will work for you. But by no means are they

the only way to go and in this new edition I want to take you on a journey with the idea that you'll be open minded and courageous enough to grow beyond them. It will be a process that takes time, it might take a year or two to totally get it. However, all good things have starting points and the sooner you start, the sooner you'll get there.

## ■ Spotting Bear Tendencies

In order to leave the momentum indicator game behind, one needs to adjust to focus on something else. Here we are going to change our focus from the indicator at the bottom of the chart to a purely support and resistance point of view.

Let's revisit our same BBH chart, in Figure 5.17, but look at it from an entirely different perspective. There is no divergence because there's no MACD. We are not looking at the high from the perspective of a divergence. We are looking at it from the vantage point that trading is a zero-sum game. In all moves, the market continues to go higher until it doesn't. An oversimplification to be sure, unless you are the one that gets caught at the top. Think of the times you bought at an extreme. What did you want to do? Get out at close to breakeven as possible, right? The two horizontal lines on this chart show the micro waves indicating small intraday pullbacks and the next small wave of buyers. As you can see, as the move drops off the high it retraces right back up to the area of the



**FIGURE 5.17** Systematic Unwind



**FIGURE 5.18** Classic Unwind

last group in. Those people exit as there are no more bulls. The next lower horizontal line shows the next group who got in late. It appears those people might not have used stop losses and ended up underwater fairly quickly. So where did they exit? They left on that big bearish bar which is the fifth off the low. It becomes the second secondary high off the top. Smart and aggressive bears see a trap and come in to short it. This is a systematic unwind off a high which is representative of a new trend. As each level of late buying gets caught, they leave as close to breakeven as possible. Look to the areas on the way up to give you a clue as to what can happen on the way down.

Under this methodology we do not micro manage the time bars because we accept the peak having come in at a 55-week high. Instead we change our focus exclusively to the support or resistance lines.

This dollar chart, in Figure 5.18, is a better example of what it means to have an unwind. Pay close attention near the high. Look at the last man in. The price action drops off the top but bounces up right near the territory of the last candle at the top. Those who might be a little more stubborn and didn't use a stop loss hung on until prices got one level lower. Those people were suddenly underwater. When did they get out? As prices retested the last leg near the high, didn't they? Also, we might have also had some people erroneously buy the first dip off the first top thinking that was a pullback. Those people were trapped as well. It turns into a bearish polarity flip. This phenomenon continues again and again as the trend continues south. While



**FIGURE 5.19** Last Man in Syndrome

we are not paying as close attention to the time bars with this method the secondary high (just below the first unwind annotation) is the Lucas forty-seventh bar off the peak. There are also other Lucas relationships in this pattern.

This is the top in 2007 for the QQQ in Figure 5.19. It exhibits the exact same concept of how polarity flips right at the point where the last group in likely gave up. Remember how euphoric the end of the bull market was. The idea was to keep buying but be sure you weren't the last man in. Eventually it had to happen. This group was quickly underwater. So where do they want out? Isn't right near where they entered so they can breakeven? That's exactly what happened. The bounce materialized until the majority of the last bears were breaking even. For our cycle work, you'll also recognize the peak of that bounce was 28 bars off the high and the downtrend started on Lucas bar 29. Prices never came back to that level. So this is a simple way to wean yourself from lagging indicators and is pattern recognition in its purest form.



# Volume Studies and Moving Averages

I believe the most useful aspect of the time factor is that anyone can use it. While it is Fibonacci or Lucas based, technicians from other disciplines can apply it just like anyone else. The rest of the technical analysis community looks at Elliott as a subjective methodology. We've proven within these pages they are indeed correct. We've also shown you a hundred different ways how to eliminate much of the subjectivity of Elliott.

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However, no matter how much you eliminate the subjectivity of Elliott, there is an element of technicians who either don't understand or don't want to understand anything concerning the waves. I can't blame them as it takes years to learn Elliott properly. One of the goals of the first edition was to make you exponentially better at your own method in the shortest time span possible.

That being said, there is a large contingent of technicians and traders who follow the William O'Neil method of technical analysis. I consider O'Neil to be one of the great innovators and technicians of the twentieth century. I cut my own teeth in this industry on the *Investors Business Daily*. He has taken a lot of people who knew nothing about the stock market and taught them a methodology that works. In this chapter we are not going to pursue his relative strength rankings of stocks or industries. It does not really apply to what we are doing here. If you want to know which stocks or industries are

outperforming the market, all you need to do is run up to the corner to get yourself a copy of the *IBD*. However, what we will do in this chapter is add to his existing methodologies.

The O’Neil philosophy encompasses picking strong companies with tight technical patterns. They rely heavily on pattern recognition highlighted by reliable patterns such as cup and handles (160-179). They also rely on good volume patterns and moving averages. These are all sound fundamental tenets of technical analysis. What we are doing here with the time factor is taking the O’Neil methodology into the twenty-first century. Just like the last chapter on divergences, we are attempting to reduce the number of times you are stopped out of positions by making a good methodology even better.

## ■ Moving Average and Volume

The *IBD* stresses the importance of the 200-day simple moving average. Many traders and money managers also add the 50-day simple moving average to their repertoire. Gary Kaltbaum has a nationally syndicated radio show and considers himself to be an O’Neil disciple. He considers the 50- and 200-day moving averages to be key gauges of whether a trend has changed (55). Shorter-term traders rely on the 20-period moving average. Elliotticians believe these moving averages are just lines on a chart. But the big money crowd as well as trend followers pay very close attention to them. I’ve observed many times when one of these moving averages happens to line up with a Fibonacci retracement point that is a good place for price action to hold the line. However, this chapter is devoted to people who are not familiar with Fibonacci retracement lines and couldn’t care less. Consequently, you won’t see any Fibonacci price retracements in these examples.

When we start a new bear trend, one of the key challenges is what will happen when we get to the 50- or 200-day average. Is it going to hold the line or not?

Figure 6.1 shows a seven-month progression off the top in Google (GOOG) in 2005. So far, we’ve had a 40-day progression off the top and a 29-day retest of the high in April 2006 that failed. In May, we are trying to ascertain whether the 200-day moving average as represented by the lighter line is going to hold. Up to this point the darker 50-day moving average has behaved like Jell-O. On the first trip down the 200 day was taken out slightly.



**FIGURE 6.1 Light Volume Bounce**

The second time down the line was tested again and held on a cluster of the eighty-ninth day off the top combined with 21 days down off the secondary high. What we can also see is that on the move up in June volume seems to be lighter than it was on the first leg down. It looks like buying volume is beginning to dry up (174). Great! That tells us we are not likely at the early stages of a new leg up, at least not here. But we've also gone up 60 points and it's not a good time to be short. When do we want to get short? Be patient and wait for the time reversal. The current trend off the May low is 32 days up, 122 days off the top, and 54 days on a high-to-high cycle off the last test of resistance.

It would seem like we are getting close to a reversal. Here's the close up in Figure 6.2. It could happen on the next bar as we would be 33 days off the last low (Fibonacci 34-1), 123 days (Lucas) off the top, and 55 days on the money off the last high. One of two things is bound to happen. We will get our reversal on this triple cluster, which is a high-probability outcome. If the market were to choose to ignore this excellent cluster, it would be a very bullish sign as a chart that ignores such a chance for a reversal is trying to tell us something. That would be the other possibility. The market



**FIGURE 6.2** Fibonacci Reversal

needs to elect this cluster as a turning point. If it's going to reverse, it has to be here. However, if we get a bearish candle with this setup, you have a high-probability winner.

Here's the chart, in Figure 6.3, just a few days later. It topped right in the area we anticipated. The best part of this situation and what gives this methodology so much promise is anticipating the turn days ahead of time. It actually topped a day early from an ideal 34/55/123-day cluster as you can see on the chart the top was the 33/54/122-day cluster. It started turning down exactly at the time it was supposed to. But even as a cluster such as this has a high-probability turn as the outcome always wait for it to validate before acting.

This time I am going to show you the scaled down hourly chart so you can see the candle and bearish divergence situation going on at the time. The daily chart doesn't give you the cleanest reversal signal as the top is created by a doji and black candle that closes below the doji. I didn't get a clear signal this was pulling away from the high unless I knew the cycle was expiring. It took nearly five days to confirm the high. However, when we scale down to the hourly time frame the situation is very clear. The two hourly bars at



**FIGURE 6.3 Fibonacci Reversal Follow Through**

the top are creating a dark cloud cover situation at the same time that we get the bearish divergence on the MACD. What else? From the congestion zone low at 401 to 402 to the top the final leg completes in exactly 46 hours. When we put all of this together, we have a turn in four degrees of trend. First is a cluster of three daily relationships, then the hourly turns at exactly the right moment.

Figure 6.4 is a daily chart of Intel (INTC) at the end of the 2002 bear market. There are a few key points on this chart. Notice the huge buying volume within days of the bottom. A nonscientific look at this chart suggests average daily volume to be around 60 to 65 million shares a day. The big day is almost three times the average daily volume. This kicks off the new up-trend. Why the giant volume day after the bottom? This is a perfect example of a short-covering rally. I didn't cover this in the first edition, but the single most important thing you will get out of this book which is noncyclical is the fact that bears fuel bull markets and bulls fuel bear markets. At any bottom, psychology is such that fear is so thick it feels like the market is going down forever. Who is willing to buy into a condition like that? The answer is nobody. What has to happen is the only buyers can be bears taking profits



**FIGURE 6.4 End of Intel Bear**

and covering their shorts. The pattern spikes sky high. Once the dust settles the high-frequency traders come in to provide liquidity to the market. Once fund managers realize the water is slightly warm they can come in and start sending prices higher. But all of this is reflected in the cycle action. Because the smart money crowd is influenced by indicators like these moving averages, they'll respect it consciously while they respect our time work on an unconscious level. That's why these timing principles work. What you want to do in order to get an edge is realize this trilogy of market timing, psychology, and indicators on the chart.

We have an uptrend that runs its course on the thirty-eighth day which is the exact day it hits the 200-day moving average. At that point we get a good bearish candle formation. Here we have a cluster of three reasons to go short. First is the 38-day cycle, which reverses right at the 200-day moving average, the second reason. You can also make out five waves to the upside, which is the third reason. Recall sentiment at the time of the bottom was very negative and on any downturn the crowd was still looking for a new low. However, if you look carefully at the Figure 6.5 chart, just below you'll see quite a relief from the fear at the bottom. In fact, sentiment was the most



**FIGURE 6.5 VIX**

bullish that it had been since the prior peak of the bear market rally back in March 2002. But sentiment was strange because even as it was given relief over the fear from the bottom and came close to euphoria levels traders still worried a new low would materialize on any and all downturns so it was that old B- or second-wave sentiment of here we go again.

The retest of the low continued into February and ended on the forty-seventh day of the trend. If you continued to stay short and held on for another 21 days you didn't get hurt too badly, but on the twenty-second day was about the time the market took off for good. On the twenty-third day off the February low we gapped up with a nice white candle after leaving a higher low for the first time in a long time. Perhaps you wouldn't consider going long just yet as it took a contrarian to go with the new trend at this stage of the game. I couldn't call this setup a cup and handle pattern for several reasons but the best one is selling volume really doesn't dry up to any degree in that 47-day retest of the low. However, what many that follow this methodology stress is moving average crossovers. Here we have a big one in April and our timing model beats it to the punch. Many traders will use the 50/200-day crossover as their buy signal and that's fine. What confirms the technical situation is the gap up occurs four days after the important one hundred twenty-seventh day of the new trend off the October low. If we were going to drop, that would have been a good time for it. Observe how price action touches the 50-day moving average on the 126- to 127-bar cycle and holds the line. Within a week we get

that crossover suggesting being long might not be a bad idea. Everything points to a change in trend and our timing model confirms it if for no other reason than by default. Our 127-day time window beats the gap and the crossover.

The moving average methodology considers a trend will stray from the mean to the upside but eventually will revert back to the mean and for large cap stocks this means a retracement back to the 50-day moving average. The 50-day moving average seems to work best in stronger relative strength stocks. However, in the universe of stocks, reality suggests moving averages are going to be violated more often. Like the U.S. Constitution, we need a check and balance system to confirm the trend is still intact. The time factor does an excellent job for us. Figure 6.6 is a chart off the secondary low back in 2003 for Qualcomm (QCOM).

The first real pullback and test of the 50-day moving average ends on a 46-day low-to-low cycle. From the chapter on rotation we can now recognize this might be a good time to enter or add to positions. The moving average crowd might consider buying at this point without knowing the time dimension—that's fine. But what's wrong with having a check and balance?



**FIGURE 6.6** QCOM Fibonacci Moving Avg Cluster

As you can see, the next pullback not only violates the 50-day average but the 200-day average as well. If you've been following the lessons here you now know that a 61-day low-to-low cycle that puts in a white candle and turns back up is a high-probability pattern-recognition scheme whether we are following moving averages or not. On day 61 the chart closes right on the 200-day moving average. What I am going to suggest here is allow the two methodologies to work together. Price action does fall below both moving averages temporarily. Here we have the good fortune to look at this chart in hindsight. In real time, you won't be so lucky. What happens in stronger trending stocks is price action will reverse near one of these moving averages on an important time bar. When the moving average and time bar cluster together you have a much stronger combination. The challenge is for stocks that are not as powerful. They will tend to violate the moving average yet reverse on the correct time bar. In this case price action explodes to the upside once again and the 50-day line is not tested again until we make another 54-day rotation off the sixty-first bar of the move. We violate the 50-day average again just below price point 22, but we are bailed out by the time cycles as we are right on the 134-day bar off the low.

To make a long story short, this chart ends up going much higher as does the rest of the market. However, nothing lasts forever. The next chart shows what happened later on near the end of the move at the top. As you can see we finally get a bearish divergence on the daily time frame but it does not cash in until such time as the final leg hits 33 days. At that point we do get a perfect evening star pattern and the trend changes. Now let's track the down trend.

What happens after the gap down is we slip below both the 50- and 200-day moving averages. What we are looking for is a bounce up to the moving average territory with a potential for failure so we can short the rally. We see this in Figure 6.7.

The question is where and when will price action top? It could choose to top exactly on the 50-day or the 200-day average. The answer is it chooses to top in the general price target but not until it hits the time cluster of 56 days high to high as well as 16 days up to the bounce. Not only that, it tops exactly at the bottom of the gap down in January which is acting as very strong resistance which becomes a double high. In this case, I would say you have four excellent reasons for a reversal right there: the two moving averages, resistance line created by the gap down, and finally the time factor.



**FIGURE 6.7 Gap Fibonacci Cluster**

## ■ Cup and Handle

We've covered moving averages as support/resistance and as the cross-over signal. One major agreement I have with the O'Neil philosophy is we are both keen fans of excellent pattern-recognition systems (160-179). The cup and handle pattern is nothing more than a tight move off a low followed by a benign retracement that can also be characterized as tight base-building period. The best handles are bases that move down slowly on declining volume. As volume dries which implies an absence of sellers, the chart explodes to the upside. I'm not here to give you an education on cup and handle patterns or claim to be the definitive expert on the subject. What I am here to do is show you how you can take your cup and handle watch list and be ready for the most precise time to enter the trade. As we've discussed before in this book, the best time to enter a trade is upon conclusion of the B- or second-wave position as the biggest move is directly in front of you. The cup is generally the wave one of the pattern and the handle is the B or second wave. What we are doing here is combining the terminology for Elliotticians,



**FIGURE 6.8 HOLX Cup and Handle**

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Fibonacci traders, and the part of the trading community that subscribes to the *Investors Business Daily*.

The first series of charts is the stock Hologic Inc. (HOLX) shown in Figure 6.8. We have a complete two-year progression which takes us from a price point just under \$4 to over \$19 per share. The next two charts illustrate the cycle patterns from the inception. However, what you can glean from this chart is a fairly tight move from 4 to 12 and a pullback back down to the nine area on declining volume. This would be the cup and handle part of the pattern. In Elliott terms, this can also be considered waves one through two. As you can see the most exciting part of the move kicks in after the handle correction.

The next chart, in Figure 6.9, highlights the first part of the move off the bottom. Clearly illustrated is the first pullback, which completes on the seventeenth day and as we hit Lucas 18 the chart never looks back. After another small-base building period which can also be interpreted as a smaller-degree cup and handle the chart takes off in earnest on the 47-day cycle as we've been discussing throughout this book in all degrees of trend. In this case between day 17 and 47 we build a base on top of a base

on relatively light volume which implies a base-building period right in the middle of filling the gap down at the beginning of February which turned out to be the exhaustion gap. Notice how on day 48 we fill that gap and take off. *Investors Business Daily* people note the big white candle. The next two pivots are on day 83 and 112, which are approximately in a rotation of a 35-day low-to-low cycle (off day 47) and followed by a 29-day (112-83) low-to-low cycle. This progression also tops in 129 days.

The next chart, in Figure 6.10, shows the larger handle area. The condition that most stands out is the decline in average volume from April all the way to September. In Elliott terms we have a typical ABC pullback that ends in a virtual double bottom. In wave terms the leg that drops until the end of September is exactly 0.618 of the first A-wave drop. In bull markets the C wave in corrections typically completes in the shortest period of time. A bear phase does the opposite as the C wave would take the most time as well as take up the most territory. This could even be considered a running correction because the second spike down at the end of September actually misses taking out the August low by one cent. In other words, this can be considered the best bullish setup you can get.



**FIGURE 6.9** HOLX First Part

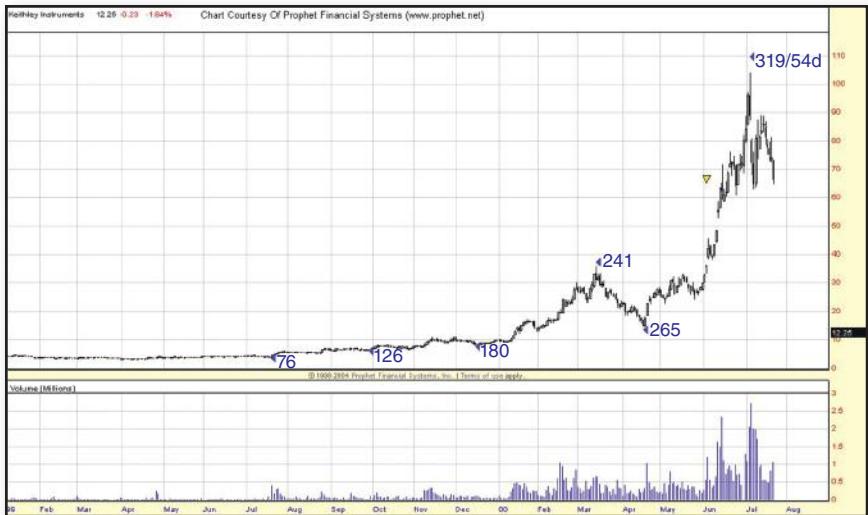


**FIGURE 6.10 HOLX Next Part**

The idea of this chapter is to determine the most precise entry to a five-month period of declining volume. The handle finally completes 61 days off the high and turns up on a good size white candle with a slight pickup in volume. As you can see, average daily volume increases until such time as we get the gap in the heart of the parabolic move north. In review, we have a pullback on declining volume with a tight base where in Elliott terms C terminates at the earliest possible point at the 0.61 percent price relationship to the A wave. All we need is the time factor to tell us when to buy.

The next two stocks were regular features of *Investors Business Daily* in the early part of the decade. Each stock exhibits many if not all of the technical characteristics necessary for greatness. The moves are not as spectacular as many tech stocks of the NASDAQ bubble but are more representative of a normal bull market.

The first case study is the 1999 to 2000 moves by Keithley Instruments shown in Figure 6.11. Here is a company that went from penny status to over 100 and that included a two-for-one stock split along the way. I suppose many came to expect this type of performance based on the bubble years where a super bull market was mistaken for brains. However, one can do the right thing and get



**FIGURE 6.11** Keithley Part I

lucky every now and then. What is interesting about this stock is the parabolic part of the move came after the markets made their historic peaks in January and March of 2000. Leaving many of the top NASDAQ names out of the discussion, Keithley has to be considered one of the best stocks ever featured in the *IBD*.

When you look at the whole advance, what is lost in the discussion is the period right at the start where you can't really make out what is going on. Furthermore, when we zoom into the early phase of the action, we can see the distinct time cycles taking shape.

We pick up the action on the next page in July 2000, in Figure 6.12, after a long base-building process. Even on what is still considered a penny stock, the movements are not random. What likely differentiates the time cycles from Elliott Waves is that in lighter volume environments it is very difficult to count good waves. As we can see here, we are still in a lighter volume environment, but the real move finally starts up as we complete the first Lucas 76 days off the bottom.

Elliotticians would call the move off the bottom a series of small-degree first and second waves. Volume enthusiasts would refer to this period as a series of small bases built on top of each other. What everyone must agree upon is each base is characterized by declining volume. What I'll add to the mix is that each base completes on some time cycle sequence. The first base that leads up to the large white candles completes in 18 days. The next base completes on the one hundred twenty-sixth day of the move off the bottom. The 127-day window is characterized by a sharp spike up in



**FIGURE 6.12** Keithley Part II

volume. The third base finds its low during the week of October 18 on that large black candle on the seventeenth day off the last pivot low. It is a congestion period and it isn't exactly clear what pushes the chart higher but we do have a three-day window from days 144 to 147 where the chart finally achieves liftoff. Whatever the case, we never do come back down to touch the support area created on the 126- to 127-day window.

If you look at the first chart of the entire move you'll see three major pivots. The first one came in at 76 days, the next at 126, and finally the last one at 180 days. The one hundred eightieth day can be interpreted several ways. Most important which is the new addition to this edition is Gann 180, which is half of a 360-degree circle but in this case between the one hundred twenty-sixth and one hundred eightieth day implies a 54-day low-to-low cycle. On the fifth-fifth day of the rotation off the 127-day cycle, Keithley starts a run that triples in value over the next 61 trading days. It pulls back for another 25 days and on the twenty-sixth day goes parabolic until the three hundred nineteenth day of the move, which makes the parabolic wave exactly 54 days.

## ■ Skechers Case Study

The final case study of this chapter first appeared in the *IBD January 2001*. Skechers came to prominence during the spring rally of 2001 when other shoe companies were doing the same thing. I'm not big into fundamentals



**FIGURE 6.13** Skechers Part I

but they did have a unique product that made sneakers and workout gear fashionable. I think that was the factor that caught the attention of investors. In any event, this was a case of another penny stock rising nearly 1,300 percent!

Figures 6.13 and 6.14 show the entire progression on a daily and weekly basis. The second is the weekly chart with daily annotation superimposed.



**FIGURE 6.14** Skechers Part II



**FIGURE 6.15** Skechers Part III

You can see how these two time frames cluster to create the various buy signals along the way.

The first two charts exhibit the bullish rotation as we hit important pivots on days 35, 62, and 96 (which is a 34-day low-to-low cycle). The final pivot is on the one hundred-eighteenth day, which is a common relationship. The ninety-sixth day corresponds to the 21-week low-to-low cycle. This stock appeared in the *IBD* in January 2001 just as it completed an 11-week pullback that clustered with the 46- to 47-week low-to-low cycle. The third chart, in Figure 6.15, shows a closeup and how divergence develops.

The first half of the move on the last chart, which is Figure 6.16, is when this stock was first featured to the public. On this chart the 50-day moving average is incorporated to give you an idea of how to compare and contrast where the time bars turn in relation to the moving average. Different moving averages will net varying results. We had a 164-day leg where you can see we were 46 days off the 118-day bar when a multimonth bearish divergence finally cashed in. The pullback is not a classic volume drying up sequence but average volume did lighten until the stock found a bottom after a pullback of 56 days which clustered with the two weekly time cycles (11/46). We have three really good clusters and this caused the stock to go parabolic in the next few weeks. You can see from the weekly chart that volume went from under one million to over three million a week.

As we progress off that low we formed yet one more base that completed on the twenty-ninth day off the pivot (next chart below) and the rest is



**FIGURE 6.16** Skechers Part IV

history. The only thing I could add is the final high is created when we get the last bearish divergence and it cashes in as the chart tops on the thirty-ninth day of the big wave or three hundred thirty-eighth day overall.

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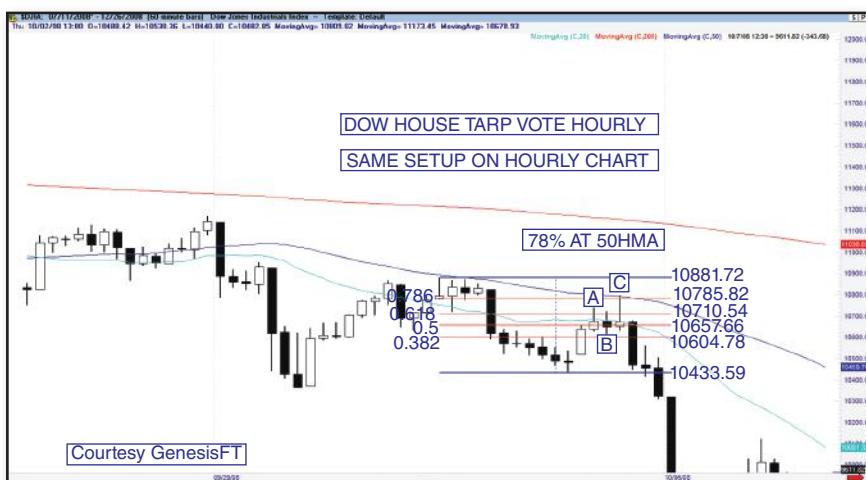
As we wind down this chapter I wanted to make it obvious how anyone can use this methodology. It is not limited to those who understand Elliott Waves. As a matter of fact there is a larger contingent in the trading community who don't understand the waves as opposed to those who do.

A large segment of the trading community uses the 50- and 200-period moving average. Another segment uses the 20 and 50. It is probably better to use the 20 if your time frame is smaller. The challenge is still the same. When you use moving averages they are not always going to be lines in the sand. Only the strongest moves will validate them to the point where whipsaws are minimized. Moving averages do work best when they line up near a common Fibonacci retracement point. The challenge is many traders who use Fibonacci retracements pay no attention to moving averages. Conversely, many traders who use moving averages pay little or no attention to common Fibonacci retracement points. I advocate to those of you who use moving averages and are being introduced to this methodology for the first time is to become aware of these tendencies. Sometimes the time bar will line up with the moving average, sometimes not. The best setups happen when you get the time bar right on the moving average with a good candle reversal bar. This doesn't always happen. If we are pulling back into

(or spiking in) a bear phase of the moving average and fall short but we get the time bar that's where the turn is going to be. If we are overshooting the moving average and reverse on the time bar, that's where the turn is going to be. Now you have another tool in your arsenal other than waiting for the moving average. Being aware of these tendencies will permit you to get into moves you may otherwise pass by.

## ■ What Happened in the Financial Crisis

Before we go let's show you what happened right at the worst part of the financial crisis, the TARP Event, Figure 6.17 and Figure 6.18, that led to the worst part of the crash. This was a combination of Fibonacci, Lucas, and a moving average. What we have is the Dow hourly that peaked at a small-degree 78 percent retracement but right at the 50-hour moving average. When we scale down to the five-minute chart we see that C was  $0.618 \times A$  at Lucas 47 bars. We already know from the first chapter this particular setup was at the 233-day window off the top of the NASDAQ. So it will give you an idea of how it's possible for every time frame from the daily down to the five minute can line up perfectly and lead to a perfect storm. These drops on a five-minute chart happen all the time. The reason it crashed was we were sitting at 233 days which is crucially important and the prevailing psychology pushed it over the edge. It's the only time our *Short Term Update*



**FIGURE 6.17** TARP Hourly



**FIGURE 6.18 TARP 5 Minute**

ever predicted a waterfall event as the high-probability event. One takeaway here is if the pattern and time window do not line up, the chances of a market crash are quite remote. The doomsayers who are always telling you the market is going to crash don't know the kind of precision really needed for such an event. You won't see the stars aligning like this very often and, consequently, you don't see crashes very often either. But this is exactly the chart our newsletter saw in the time leading up to the disaster.

These case studies represent how you can add greater precision to moving average crossovers, moving average support/resistance, and volume studies as well as time-tested patterns such as the cup and handle. In the other chapters we applied candlesticks, support/resistance, and momentum indicators with their divergences. The principles that we apply to intraday charts on the indices are exactly the same as applied to patterns on stocks. As a matter of fact, we don't even need these stocks to be the heavily traded big caps as most great stocks that become leaders start out small.

The only thing I'm not covering in this chapter is stock selection. If you use the *IBD* methodology you will find ratings systems for relative strength as well as the accumulation or distribution by the big money mutual fund players. The idea behind stock selection is generally a game of sector rotation. What you want to do is find a sector that is emerging and pick the strongest stocks of the group. Mind you, I'm not talking about the fundamental picture but rather to ride on the coattails of the better stocks the big money players believe are the best stocks. What you will likely find is

fundamentally these stocks will be one and the same. You have enough work to do keeping track of the technical picture with your new skill to worry about the profit and loss statements of companies.

We have completed most of our study of how the time factor can be combined with contemporary technical analysis. The next factor we are going to focus on is more future driven. Now that we have the non-Fibonacci/Elliott people on board, I'm going to show you how to project high-probability price targets either for the end of bull moves or where a correction is likely to complete.



# Fibonacci Price Projections

In every walk of life, we make plans and projections for outcomes. A whole industry was created for people who want to lose weight. Weigh 190 and want to be 160? Why not? If you follow certain guidelines and disciplines you can achieve your goal.

Every business, large and small, that has ever succeeded had to develop a forecast. A business has to develop not only one, but three forecasts for revenues based on pessimistic, average, or optimistic expectations. Based upon prevailing business conditions, management usually has a very good idea of which forecast is going to turn out right.

When we graduate from high school and make plans to go to college, we make a projection of how much it's going to cost and how long it will take. If we are good about our own lives, we are also planning our careers, finances, vacations, and each day of our lives. This is part of the goal-planning process. The more successful of us do it on a regular basis. The less successful spend more time planning what they are going to watch on TV or what they are going to have for dinner than they do on their lives. You know what? The results speak for themselves.

However, a funny thing happens when it comes to financial markets. Speaking exclusively about the stock market bubble of the late 1990s, 90 percent of the public lost 90 percent of their bankrolls. Why is that? Sentiment plays a big part. Individually, we are all intelligent people and know what to do. However, peer pressure and our natural tendency to

conform to the crowd causes the best and smartest of us to do the dumbest things at the wrong time when it comes to financial markets.

There is another side to this. Many of us have been brainwashed by academia to believe movements in financial markets are completely random. I think we've proven beyond a shadow of a doubt thus far the fallacy of Random Walk theory. Wall Street analysts who have attended our top universities and had to endure years of this financial nonsense still make projections for companies based on complicated formulas based on revenues and P/E ratios. They don't have any idea when these projections might be achieved, yet they make these projections anyway.

What we are going to do in this chapter is leave the academics and the fundamental analysts behind. We are going to learn how to make high-probability price projections based on the natural tendencies of universal law. It's the same rule a quarterback uses to throw a pass down the length of the field based on his wide receiver running the 40-yard dash in 4.4 seconds. If it takes the receiver seven seconds to get past a defender and run down the sideline, the quarterback knows that to hit a target on the run he has to release the ball within three to four seconds from the time the ball is snapped. He projects the ball arriving around 45 yards down the field at the same time the receiver gets there. That is precisely how we hit a moving target on the run. It's also exactly how we know a 747 will go from Los Angeles to New York in approximately five hours when it goes 600 miles an hour.

We've spent the majority of this book illustrating how long it takes a financial instrument to go from point A to point B. The way we hit a moving target is by understanding the tendencies of how charts choose their destinations. We know how long it takes to get there. The quarterback knows how long it takes for the receiver to go from point A to point B, his job is to project the ball down the field without interference (the defender) getting in the way. Since the cycles tell us how long it is going to take to get there, we must overcome our own interference (emotions and other noise factors) and have the patience to allow price action to get to our goal.

Remember what made Wayne Gretzky great? The rest of the players were chasing the puck. Mr. Gretzky was already calculating in his mind where he thought the puck was going. Consequently, he was a step ahead of everyone else. Hopefully, by the end of this chapter you will be a step ahead of the competition as well.

We've already covered the basic Fibonacci relationships. A quick review is in order. Waves one and five tend to equality or have 0.618/1.618 relationships to each other. Wave three is never the shortest wave and will

either choose to extend 1.618, 2.618, or 4.23 times the length of wave one as measured from the bottom of wave two. In bull markets, an ABC correction will usually have the C wave being 0.618 times the length of the A wave. We've covered the interwave relationships of triangles as well as their thrust measurements.

The problem with all of these possibilities is, which one is the market likely to elect? That is a good question and in quantum physics the answer is a market will do whatever it wants whenever it wants. Luckily, it leaves clues as to the tendencies. Since this is a game of probabilities we have to look at the highest-probability tendency.

## ■ Retracements

How do we do this? When we are looking at a price chart we need to be aware of where support/resistance lines are as well as moving averages. Many times the 50- or 200-day moving average is going to be within pennies of one of the Fibonacci retracement points. Funny how it works that Fibonacci players and *Investor's Business Daily* people make the exact same projections? It's because the moving average is in the same place as the Fibonacci retracement point. But it doesn't always work out this way.

Starting with price retracements, the way we determine the highest-probability point for a reversal is to draw Fibonacci retracements from various pivot points along the larger-degree move. What we will find is a set of price point retracement clusters lining up in the same place. Odds are this becomes the highest-probability point for the termination of a correction whether a bull or bear phase.

If we can't get an exact point where two Fibonacci price points line up, we will wait for the first retracement leg and look for a combination of factors.

Figure 7.1 is a weekly chart of the S&P 500 from the August 2004 low to the early August 2005 high. For now, forget about the time cycles. Since we can make a case for a five-wave sequence from the low to the March 2005 high as well the August 2005 high, we have to draw a series of Fibonacci retracements from the top to the bottom and from the top to the first pivot low in October 2004. The truth is we don't know exactly how much of the move up is going to be retraced. It is really a trial and error process.

One clue might be that the first leg down retraced 23 percent of the entire move up. Looking at how these retracement markers line up, our first



**FIGURE 7.1** Fibonacci Retracement Cluster

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conclusion would be to look for a pullback to the 1150 area as that is the 50 percent retracement of the whole move but only a couple of points off the 61 percent retracement off the secondary bottom. We look for a cluster because the two points are closest together. Without having any other information to go on, this immediately becomes the highest-probability point to consider.

Another area to consider would be the 1140 area, which represents the smaller 61 percent retracement that is near the April low. It's the prior area of support.

Once the first leg down off the high completes we have a little more information to go by and we start looking to see if there are any correlations between internal wave extension points and Fibonacci points in Figure 7.2. The more information we have, the easier it is to make a forecast. If you were a quarterback and the chart is the field, you could anticipate your receivers being in one of three places. Of course, you might say this is not very helpful because we still have a degree of uncertainty. You are right! It's easy to ascertain what happened by looking at the charts after the fact.



**FIGURE 7.2** Fibonacci Continuation

However, it's better to have three potential reversal points to start with than none. It's better to have some idea of what is going to happen than flying by the seat of your pants. The first chart is what *The Forecaster* email forecasting service had to work with when the retest of the high failed. At that point, the 1.618 extension of the A leg as measured from the top of the B leg projected to 1168. As it turned out, the 50 percent retracement point off the secondary low from October 2004 was also 1168. However, until the first leg down and retest of the high failed we could not make such a projection. Now that we are armed with this new information this cluster of a Fibonacci retracement point as well as an interwave extension point increased the probabilities greatly that we should be pinpointing the 1168 area as a high-probability outcome point. That is exactly what happened. The chart reversed exactly on 1168. While this is not a chapter on the time factor we can see a good cluster here as well. The October 2005 price point is 11 weeks down, 26 weeks off the April low, and 62 weeks off the bottom. Everything checks out.

The next case study exhibits many of the characteristics necessary for coming up with good Fibonacci projections. Figure 7.3 is a chart of the XAU



**FIGURE 7.3 XAU Bottom**

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bottom. How many remember it? I'm sure many who are reading this got excited about gold and gold stocks somewhere along the way early in the decade.

Keep in mind how sentiment affects our thinking around any bottom. Gold and gold stocks were so hated and trashed that nobody believed in their ability to go anywhere but down, let alone the moon! We are looking at a weekly chart showing only the first wave up. Notice how the rise of the first wave from the 40s into the high 60s tops in 29 weeks. The dark cloud cover in week 30 suggests we are going to have a pullback. Try to remember at that time we don't know if the leg down is going to create a new low or not.

The first thing you want to do is draw Fibonacci retracement lines for the entire leg up. The second thing you want to do is find a support area somewhere in that first wave up and draw the Fibonacci retracement lines. We don't know if this is going to be a retracement leg or a continuation of the long bear market for gold stocks, do we? The only real way to know is through a process of elimination. If the entire wave were to have a meaningful

retracement through the 61 percent level, odds are it is either going all the way to retest the low or continue on with a fresh low. Until that happens, we really don't know.

If we draw retracement levels in at least two degrees of trend (like we've done on this chart) we have some kind of idea of where the important violations would occur. There is a 50 percent/38 percent, 61 percent/50 percent, and 78 percent/61 percent. These are the three main clusters of where this leg can end. It is only at the point in time when all of these clusters are violated that we seriously consider this leg is going back to retest the low.

The purpose of this exercise is to develop discipline to not look too far down the road. If you listen to the television too much, the tendency is to get caught up in the emotion of far-reaching predictions. Looking at the situation at the dark cloud cover in week 30, do we really have any idea what this wave is going to do? Keep in mind what we discussed way back in Chapter 1. Sentiment in wave two tends to repeat the sentiment of the overall prior trend. In this case, it's here we go again. The only way you can stay in control of your emotions and separate yourself from the crowd is to follow this discipline, keep your head in the chart, and block the emotions of the crowd.

This chart throws us several curve balls. First of all, the first leg down retraces 61 percent of the move up. Some players conclude the correction is over. The bounce off the 61 percent low doesn't look like it has a lot of short covering. The way you can tell it's short covering is by wide range bars, as here in the new edition I've added a daily chart of the exact same action.

In this new edition I've included the daily chart with a close-up of the five-wave sequence of this C leg down as well in Figure 7.4. You can see a short first wave that is week 48. By the time we get to weeks 54 to 56 for wave five there is a 1.618 extension of wave one of this C leg from week 48 on the 78 percent retracement line on the original weekly chart above.

In terms of Fibonacci readings it's a good cluster point, but we never front run the bars until we see what happens. In this case the market explodes higher. Why? If you want to see a good short-covering rally, this is it. Compare and contrast it to the initial move off 61 percent in Figure 7.5. That one was anemic. In the second instance because it's so close to support everyone is in agreement it doesn't want to go down anymore, so all the bears start heading for the hills. The more evidence you have, the more you



**FIGURE 7.4** XAU Bottom Closeup

can build a case to develop the courage of your convictions to do the right thing at the right time. In this case, since it would be a very scary proposition, what you are likely to do is build a small position at first, see if it works out, and add to it over time. When short covering starts, you don't really know if and when it will stop going up. Look at the original weekly as the price action moves to a retest of the original high and then there is a sharp four-week selloff. When that leg quits going down the real bulls get empowered to come in and stay in.



**FIGURE 7.5** Short-Covering Rally



**FIGURE 7.6** 2.33 Extension

Looking at this with hindsight, we know the chart went all the way to 170. Realistically, nobody had any idea that was ever going to happen when that retest of the low confirmed. The only thing we could possibly project is the 1.618 extension that would take us into the 80s. What actually happened was we had a range on this entire pullback from 66.30 to 49.23 for 17.07 points. The move up over approximately the next 26 weeks was 49.23 to 89.11 for 39.88 points. Take  $39.88/17.07$ , it is exactly a 2.33 point extension. You see that right; it is a Fibonacci derivative 233 extension in Figure 7.6.

The XAU chart is a great example of how we can project the end of waves based on common Fibonacci projections. As you can see, projections for the end of corrections are much trickier. Nobody has ever come up with the perfect script, but this one is as close as you can get. Since practice makes perfect, let's look at a few more examples. I believe the more examples you see will cause your visual cues to kick in and it will be much easier for you to recognize these patterns in real time.

## ■ Extensions

Our next case study is a bull phase for Safeway Stores (SWY). Here is another case of how we project a 1.618 price extension target of the first wave as measured from the bottom of wave two. When it is taken out you can see the magnet that attracts this chart up to the 2.618 price extension where it tops and goes no further in the current cycle as seen in Figure 7.7.



**FIGURE 7.7 261 Extension**

This is another strange pattern where the first leg off the bottom is 17 days and the second wave correction is 85 days for a total of 102 at price point 18 near the end of March. This pattern takes off on the one hundred third day and tops on the two hundred thirty-eighth day. What is strange about this? Everything on this chart, in Figure 7.8, is a square of 17. The second leg ends on the one hundred second day, which is  $17 \times 6$  and 238 is  $17 \times 14$ . The time element on this chart turns out to be more of a geometric element than a Fibonacci element. In a sense this was the case study where we left off in the first edition and pick up here because the geometric element really introduces us to Gann.

Then we take a closer look in Figure 7.9. After the 1.618 price target is taken out, we project a 2.618 price target. By the time that is hit, we have a wave one that measures 2.618 in terms of price and eight times in terms of time. The other factor that stands out on this chart like a sore thumb is MACD momentum peaks shortly after the gap up in April that kicks off the third wave. We had a bearish divergence from the time in June where we hit the one hundred sixty-second day of the move, which extends another four months. If there ever was a textbook signal of why you don't short a bearish divergence until the right time, this one is it. The final wave up does not peak until we hit a cluster of 26 days up for the final wave, but a high-to-high cycle of 76 (Lucas) days with the last major high at day 162 ( $238 - 162 = 76$ ).



**FIGURE 7.8** Safeway Symmetry

Before we leave this chart, we zoom in on the big corrective second wave. As you can see, we have an ABC progression where A completed in 39 days and C completed in 26 days, which are both multiples of 13. In terms of price, the C wave measures  $0.618 \times$  the A wave. We've mentioned earlier that in bullish progressions the C wave will elect the shorter 0.618 relationship with its A-wave counterpart. Here we have a case where C is taking  $\frac{2}{3}$  of the time the A wave progressed and only moving 0.618 in terms of price.



**FIGURE 7.9** Safeway Symmetry II

It finally bottoms on the 78 percent price retracement. Notice the white candle, which is a bullish piercing reversal right on the time/price cluster.

As we try to figure out if this chart might take off we realize the A-wave down already retraced 78 percent and if it were to have a 1.618 extension south it would nullify the whole first wave move up because it would have to go beyond the October 25 bottom. As we apply common sense to the situation, we see a second wave can only do one of two things. It's either coming to support the A-wave low or it's retesting the bottom. There are no other options here without deciding something else is going on. The chart elects the 78 percent level as it clusters with  $C=0.618\times A$ . Realize that if a chart doesn't stop at a certain retracement level, probabilities shift that it goes to the next retracement level. That explains the calculation side.

There's another way to look at this. By the time we get to the calculation cluster others are looking at the retest of the January 2005 A-wave low. Bears can't push it down any more and here we have a retest of support which is what Joe DiNapoli calls the wash and rinse. Institutional traders don't like to risk big money, they want the water to be warm. They look for retests and another term we can use is a stop run. There are no more bears sitting under this market waiting to take it down. The net result is that everyone is in agreement there is no place for this chart to go other than up. Bears will take profits, cover shorts, and head for the hills. On the next pullback, legitimate buyers come in to take the action a lot higher. The calculations should be used as a tool to help you figure out where turns are coming. There are traders who will look exclusively at support/resistance, others who will know these calculations, and others who will look at both.

Last chapter we covered Skechers in terms of price, volume, and time. We revisit this chart, in Figure 7.10, again because we have a whole new set of Fibonacci price relationships that exhibit how to determine where a retracement will end. The first chart shows the whole progression from January 2000 through May 2001. Let's look at this wave from the top of five of (three) at the end of February 2001. I've drawn Fibonacci retracement lines from the three major pivots on this chart. The 38 percent retracement line matches up with the 61 percent line and falls right in the middle of the 50 to 61 percent retracement zone that covers the area from the October 2000 pivot. This chart illustrates another wave concept which is a fourth wave will end in the same area of the prior fourth wave of one lower degree. In this case, we can present an argument of a subdividing third wave in a larger five-wave sequence. Look at the area around price point 21 in February and March 2001. Not only do we have a good cluster of three Fibonacci



**FIGURE 7.10** Skechers Fibonacci Cluster

retracement points terminating all in the same general place, but we also have a prior fourth wave which acts as a support line. In this case we aren't even considering the time relationships, but we have those as well. We have any number of relationships terminating at 21 which will end the steep correction, but there is one more. Check out where the first wave tops back in September 2000. Each fourth wave in the sequence does not overlap that first wave. As we watch fourth waves we also want to recognize where the first wave terminated and if price action violates into that area there is a good chance something else is going on other than getting ready to take off in a fifth wave. Keep in mind that I said traditional Elliott works a lot of the time, but there are gaps. This is one of those times where the traditional Elliott compass keeps us on track.

Our final chart of Skechers, in Figure 7.11, illustrates how we might determine where the second wave correction might end.

This is a close-up of the first and second waves. The second wave takes on the shape of an ABC where just like Safeway, the C wave is  $0.618 \times$  the A wave. We've drawn the Fibonacci retracement lines and you can see where the 50 percent and 61 percent retracement lines create an invisible line of support. C ends where it does equal  $0.618 \times A$ , and we have three

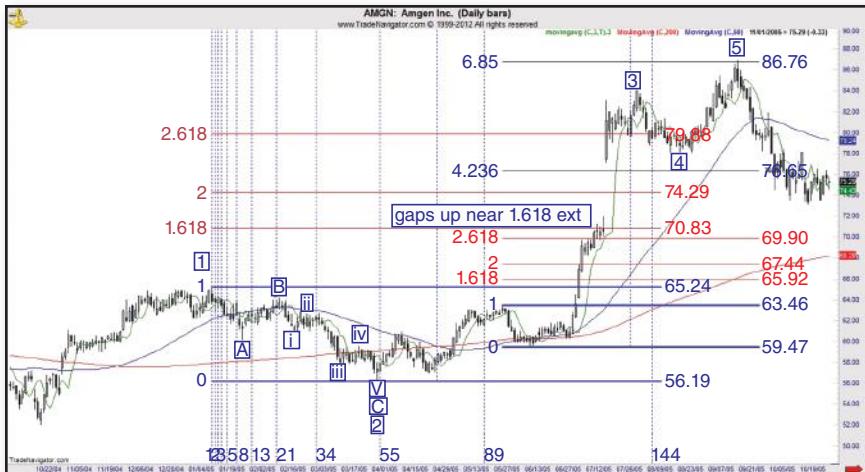


**FIGURE 7.11 ABC Correction**

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relationships terminating at that line not counting the time element. How do you recognize the turn? First you have these clusters and then you have the morning star candle pattern that validates the reversal. You don't take the trade until everything is in place.

We've covered many common relationship scenarios. If all we had to plan for was common Fibonacci relationships we would all be a lot richer. I won't say there are an infinite amount of possibilities but we are dealing with nature and there are enough lower-probability scenarios to be aware of that are still a practical part of our trading day. Some of these charts are so complex that it is not worth trying to figure out all of the relationships in them. The best way to deal with them is to attempt to line up the calculations with support and resistance. Looking at the C low above, it's also a retest of an important support line. It's a wash-and-rinse stop run where there are no bears sitting under the market. But if there isn't anything obvious like a retest of support/resistance and you still find lesser calculations you should ignore it. It's just easier to find a better setup. But there are lesser calculations and more complex situations.



**FIGURE 7.12** Amgen 6.85 Correction

However, a Fibonacci study would not be complete unless we at least attempt to cover some of the more complex scenarios so you will recognize them when you see them.

A lower-probability scenario, in Figure 7.12, is the 6.85 price extension. The 6.85 extension materializes by adding 4.23 and 2.618.

Here are the important points on this chart. Wave two completes just under 55 days. The A wave to that correction has a range of 5.07. The move from the B-wave high is  $64.17 - 56.19 = 7.98$ . The ratio is  $0.635 / 1.57$ . This is not the perfect  $61/161$ , but it's really close. The fifth wave of that progression is also close to being 0.618 of the third wave as well. Now take the extension of the entire second wave down. The 1.618 extension of that move is a very good approximation for the gap up. The 4.23 extension ( $2.618 + 1.618$ ) is a very close approximation for the end point where the action opens after the gap up. Finally the 6.85 extension is the top. We don't see this kind of condition every day, but when you do you should realize it's not a coincidence.

Figure 7.13 illustrates the second half of a four-year move in Apple Computer (AAPL). This chart has been on a tremendous tear. Based on all possible common Fibonacci extensions, no other count works as well as this one does so one has to conclude we have a rare second wave triangle (it works, d up is  $0.618 \times b$  up). The gap up is on the thirty-third day of the triangle. When we consider this triangle we have a very close approximation to a 4.23 extension near the top of three. The triangle also works from the vantage point of the time factor. While the gap up is the thirty-third day off the wave-one high it is



**FIGURE 7.13** Apple 4.23 Extension

also the forty-fourth day of the move. If we take the one hundred fiftieth bar and subtract the first 43 bars we have a 107-day third wave (one shy of a Gann 108 cycle) which is a 4.23 extension. The top is 170 days and we subtract the first 43 bars and the whole leg is 127 days, which also works very well. At press time for this book, this chart also had a 2006 leg down of 126 days and a leg up into January 2007 of another 127 days. Waves one and five have a close 0.618/1.618 relationship to each other.

While we are talking about AAPL I have some more interesting Fibonacci timing examples that have materialized since the first edition came out.

This is the end of an important correction in AAPL in 2011 shown in Figure 7.14, it is 609 trading days off the 2009 bottom and the range is 54.40, almost 55 points. All of this coincides with the 200-day moving average. It's important to realize that when you start looking to take the trade it's important to have logic behind the trade. Institutional traders were looking for the move back to the 200. That may be a decent reason to go long, but what happens many times during a downtrend will be a repeated test of the 200. Most moves to the 200 don't coincide with important time windows. But moves to the 200 that have additional reasons or information add to the



**FIGURE 7.14** 609-Day Time Window

probability that such a trade is going to work out. Here there are three reasons: the moving average, the big 610-day window, and the Fibonacci range. It's little wonder this pattern exploded higher and it did so at a time when the rest of the market was topping out in the period leading up to the debt ceiling debacle and the European crisis.

The next two charts are the AAPL bear market. The first phase, in Figure 7.15, was a 20-week high-to-high cycle, but the exact bear market rally was Fibonacci 55 days up. The total bear market, in Figure 7.16, is approximately 55 weeks.



**FIGURE 7.15** 55 Days Up



**FIGURE 7.16 AAPL Financial Crisis**

We've seen how to project target points using common Fibonacci interwave extensions. They work in the vast majority of cases. To summarize, we are primarily looking for a 1.618 extension in the third wave as measured from the bottom of wave two. If this were all you got out of this chapter you would understand why Gann stated the most-profitable and highest-probability move takes place in a new trend after the first leg up which is then followed by the first retracement. Gann came along before Elliott, so he didn't know to call it a third wave. The wave doesn't necessarily stop at the 1.618 extension point. If you are tracking a wave that takes out the 1.618 extension point, the probability shifts that it is targeting 2.618 instead. The vast majority of extensions are 1.618 or 2.618. In certain instances we are going to have a 4.23 extension and we've even seen 6.85. You always want to look at support and resistance levels but when we have big moves in all-in markets once we get beyond one extension point, many times the next extension will act as a magnet to the action.

We've seen this chart, in Figure 7.17, earlier near the top. The April top was 2375 and the first leg down in early May hit a near-term low at 2295 for 80 points. The high on May 8 was 2352 when the real drop started in earnest. Do the math,  $4.23 \times 80$  is 338. We hit a low on July 18 at 2012.78. Subtracting 338 from 2352 nets 2014 and we missed that target by one point, which started a wave in the opposite direction. As you can see, 4.23 extensions only kick in extreme situations. For instance, some of the larger selloffs of the past couple of years have been 4.23 extensions. Internal calculations for selling waves in the XAU and SOX have shown 4.23 extensions. The verdict on 4.23 extensions



**FIGURE 7.17** NASDAQ 4.23 Extension

is they are a lower probability, but when a wave seemingly gets out of control as the recent NASDAQ chart did, you may be able to recognize a low (as the *Fibonacci Forecaster* did) using this common Fibonacci extension point.

## ■ Case Study

To conclude the chapter, here's a case study not in the first edition. It's a complete study of the Russell 2000 bear from 2007 to 2009.

This is a great case study that combines several elements of Fibonacci timing work. Let's start with the topping process shown in Figure 7.18. The absolute top came in on July 13, 2007, to a low in August and round trip retest of the top, which didn't quite take out the top in early October coinciding with the big turn by the Dow and SPX. We have 90 calendar days on a high-to-high basis, which is either Fibonacci 89(+1) or Gann 90. Either way when we consider the shared bar at that August low we have 55.5 days out of 90 on the retracement, which in terms of time is a 0.616 time retracement. That's a major market top but a really good double top for the Russell.



**FIGURE 7.18 Russell Part I**

But as we look at the internals of the rebound leg we have a range of 69.68 for the A and 116 points for the total in Figure 7.19. What that does is give us a move where the A wave is 0.60 of the whole move from the low to the top of C. You can see how this pattern has perfection in terms of Fibonacci symmetry of price and time.

Let's look at the entire bear market in Figure 7.20. In terms of percentage change, the whole bear dropped 60 percent. In the bear there was one major rally. From the high point of that rally, the percentage drop was Fibonacci



**FIGURE 7.19 Russell Part II**



**FIGURE 7.20** Russell Part III

55 percent. From the last bounce rally the drop to the final bottom was 33.99 percent. It had to be off just a little, right? So what we have for the Russell is a total drop of 60 percent—close to golden spiral 61, a drop of 55 percent, and finally a drop of 34 percent.

Finally, when we take the last leg up to the high, the bottom turns out to be a close approximation for a 2.618 extension of that move. This last example, in Figure 7.21, actually is a theme in the next chapter, but I wanted to keep all of the Russell charts together.



**FIGURE 7.21** Russell-Fibonacci Percent Change

You should know you won't see examples like this every day or even every month. This is one of the very best examples of symmetry you will ever see. As you can see, it is far superior to the other examples in this chapter. The other examples in this chapter are far more representative of conditions you'll see on a regular basis as a trader who understands the time factor of financial markets. This example is here so you can differentiate good from great. It is here so you'll see what the Rolls Royce of Fibonacci conditions looks like. It allows you to better understand the significance of the financial crash and be able to recognize the symmetries should such a bear market ever materialize again.

Several times since the bottom the European equity bears have bet the farm on the next crash, which didn't happen as of the writing of this chapter in late 2012. The reason it never happens is because the really good symmetries have never materialized again.

This is the basic structure of how retracements and extensions work. As you can see, they don't work in all cases. Nothing works in all cases. Why? Because we are dealing with Chaos theory and quantum physics, that's why. There are things in the universe that are still beyond the comprehension of our best scientists. If medical science understood everything, we'd cure all disease. Of course, we've closed the gap on many killer diseases just as we are closing the gap in our understanding of financial markets.

In the next chapter, we are going to work at closing that gap even further. We are going to look at a different way to measure Fibonacci extensions. We will start to examine some really advanced techniques. They don't work in every case, but there are enough examples in all degrees of trend to work with them successfully. I haven't included them until now because we first had to set the table with the fundamental relationships. I will tell you, when I started working with these advanced techniques, my understanding of technical analysis took another quantum leap forward.

# Advanced Projection Techniques

Up to this point, we've put together a very decent catalogue of Fibonacci and Lucas studies. We are at a point where we've covered just about every way the vast majority of traders use their methodology of choice and combine it with the Lucas cycles to create the best pattern-recognition methodology on the planet.

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I like to use sports analogies and we are at the point where you now have enough tools in your arsenal not only to make the playoffs but qualify for the championship game. We are not happy just to get to this point. We are not happy with just getting to the championship game. Think about your favorite sports teams. Whether you follow the NFL or World Cup Soccer, isn't it painful to lose the big one?

Let's take the Super Bowl, for instance. Your team fights all season just to qualify for the playoffs. Depending on where they finished the season, they either have to survive two or three big playoff games to get to the Super Bowl. They get to the Super Bowl and now you have to endure two weeks of hype leading up to the game. It's a very exciting time but I don't think I have to tell you how much it's going to hurt if your team loses. They had a great season, in any event. However, if you come so close, why not win the thing?

And what's the difference between winning and losing? Not much, really. It's the little things that mean a lot. It's that extra bit of preparation, that

extra 15 minutes of practice. It's the extra studying, paying attention to small detail. Sometimes, it might be just adding that one extra surprise play that catches the other team off guard that is the difference between winning and losing.

This doesn't only apply to sports, it also applies to life. Many years ago, when I was in sales, I had to apply this to my own life. I used to work for 3m Sound Products, which is a division of 3m (MMM). Those were the guys who actually did invent Post-It Notes™. In any event, the Sound Products division was the main competitor to Muzak™. Muzak is the originator of elevator music. Before there was XM or Sirius satellite radio, there was Muzak and 3m supplying commercial-free music to retail stores, restaurants, and any other place that required background music. They also supply the drive-thru intercom systems at all fast food chains. Don't have time to run into McDonald's? You can thank 3m for creating a state-of-the-art intercom at the drive thru to get you in and out as quickly as possible.

It was my job to sell these systems to supermarkets, restaurants, and fast food chains as well as hotels. Back in the day, I used to live in Southern California, and a brand new Hilton Hotel was being built right across the street from my apartment complex in Woodland Hills. I was a rookie in the company and I suppose I didn't know any better. But I wanted to sell that Hilton. At that time, the hotel was just a skeleton and I drove past it every day on my way to the office, visualizing closing that deal. This went on for several weeks. I kept calling, always getting the answering machine or a secretary. Finally, it was two days before Christmas when the project director actually took the call and told me to come out on Friday afternoon, December 24, at 2 p.m. I'll never forget it. I don't know about your city, but the LA business community closes up like a drum on Christmas Eve. I told this to the director and he assured me he would be there.

I showed up on time and the joke was on me. His office was in a beautiful complex right across the street from where they were building the hotel. When I got there, the construction crews were gone. What was normally so active and noisy, you could now hear a pin drop. Across the street at the office, the place was deserted. Everyone was gone and the building was even locked up. Everyone was gone for Christmas, except me. I don't think I have to tell you how much of a bummer that was. I got over it, not quite....

After New Year's, the division president at 3m announced a huge sales contest for everyone in their six western offices, which included Los Angeles, San Jose, Oakland, Portland, Seattle, and San Diego. First place was a \$3,500

bonus plus all of the commissions that go with that kind of production. We had to hit certain production levels to even qualify and I found out through the grapevine that nobody in the five years they had been running this contest ever won. Isn't that nice?

Every day, I still saw that Hilton going up and now it wasn't a skeleton anymore. I continued to call but nobody ever returned my calls for about six weeks. One day I had enough. I don't know if I got tired of the rejection, if I was curious, or I just had nothing to lose anymore. I just walked into the office without an appointment and handed my card to the project manager. He floored me.

He looked at me and said, "Where have you been, I've been looking for you!" I was astonished! I asked him about the Christmas fiasco and all of the unreturned phone calls. He just nonchalantly brushed me aside and said, "Don't worry about it."

To make a long story short, I found out this person was the key project manager for 15 Hilton Hotels built in Southern California through the 1970s and 1980s. He had one sound contractor that had done every project, but now that sound contractor was being indicted for income tax evasion and was unavailable for this project. The problem for my project manager was the drywall people were scheduled to close the lobbies and ballrooms in six weeks and they didn't even have a sound contractor lined up! Can you imagine a classy hotel without a sound system to pipe in that beautiful music with your breakfast? Can you imagine the convention ballrooms without speakers? Worse, can you imagine how much it would cost to delay the drywall people or rip up the walls later on after the job was finished? The bottom line is you can't have a hotel without a sound system.

I guess you've figured out where I'm going with this. My company got the job. Including the security system, this turned out to be a \$100,000 contract. This was back in the 1980s, so a hundred grand meant something. This turned out to be the largest single contract in the history of the company up to this point. Yes, I did win that sales contest.

Later on, I found out this person was a buddy of Kerk Kerkorian and was contracted to remodel the Sands hotel in Las Vegas. Before they finally scrubbed the whole project, they were planning on building a huge convention center as well as a complete revamping of the closed-circuit TV system in the hotel. This was at a point in history where the only new hotel that opened in the new Las Vegas was the Mirage. Most of the Las Vegas you see now was in the early stages of construction.

I used to drive out to Vegas with my project manager because my company was in line to do the Sands. One day, I asked him why he stood me up that Christmas Eve. What he told me, I've remembered to this day. He turned to me and said, "Jeff, you see that I'm in a position where I'm responsible for millions of dollars and have people coming in and out of my office all day long. You also see all of the crackpots that are trying to sell me on every damn scheme you can think of." He took a deep breath and after a long silent pause finally said, "What I put you through was a test. I need people I can rely on. Most people never would have come back. But I thought that if you ever came back after all I put you through, the job was yours!"

There you have it. If I ever came back, the job was mine. Only I didn't know it at the time and most people don't come back. The fact that the Sands property was sold and Kerk Kerkorian was no longer being involved eliminated us both from that project is irrelevant. I believe the Venetian now stands where the Sands once did. I had learned one of the most important lessons in my life.

It was that one extra expenditure of energy that made all of the difference. I used that extra money to move from LA to Phoenix at the time. We missed all of the calamities in Southern California in the early 1990s. We missed the Northridge earthquake, fires, floods, Rodney King, and the riots. Remember those? We also missed the OJ Simpson trial. It was a good time to leave LA. My whole life changed and it never would have happened if I didn't decide to make that one extra effort.

I've told you this story because we've come a long way here. To win the championship, we need to stretch a little more. In trading, you don't need to hit home runs every day. In trading, winning the championship means being able to get into consistent winning situations and reducing your stop-out ratio. If you are really close to breakeven or just starting to win small, any edge will make a big difference for you. If you can beat the odds of people who don't lose the bankroll and start to turn a profit in the long haul, you are on the road to winning the championship in your own life.

What many Fibonacci and wave analysts teach are the common wave relationships in relation to each other. I did that here as well, except that I've expanded on that concept by reducing the subjectivity of Elliott with the time factor. Now you have a firm foundation. But as I've stated repeatedly, common Elliott Waves don't work all the time. The gap when they don't work is enough to put a dent in your bankroll. Common Fibonacci

relationships don't work all of the time, either. We need to close the gap for the times it doesn't work and show you what is going on. That edge may turn out to be the difference between winning and losing.

There is a vital relationship between corrections and advances. Most of the Elliott material I've seen teaches there is an extension relationship between waves that are measured from the bottom of corrections. For instance, we've discussed that a third wave will extend 1.618 times the length of wave one, but measure from the bottom of wave two.

What we are adding is the fact that waves themselves will be exact extensions of the corrective legs that immediately preceded them. Extensions based on corrections are a natural phenomenon on price charts. However the subject deserves its own section. They are advanced because most of us learned Fibonacci or Elliott by comparing relationships between impulse waves. It requires a different paradigm to compare waves to corrections. Corrections are very complex and what few people realize is the next leg of the pattern is going to come close to completing a ratio in proportion to the size of the pullback.

Want to know the potential of the first leg of a new pattern? Another variation is to look at the final leg of the old pattern. I've observed this phenomenon countless times in all degrees of trend. In many instances, a first wave will be in some Fibonacci proportion to the final leg of the just-completed pattern. In many cases, the final leg of the old pattern is going to have an inverse relationship to entire moves going the other way after the reversal.

These relationships don't work all of the time, so the contemporary Elliott community gives it lip service and most other disciplines are not even aware they exist. I've introduced it late in this book because it is another building block that is placed on top of the others and will be an important tool in your arsenal. By themselves, Fibonacci extensions are of a lesser value because they don't work all of the time. However, they work often enough to use them as price targets. They certainly support common Fibonacci calculations and cluster with them. Remember, what we are doing is finding as many relationships as possible at a common point in order to take a trade. Certainly when common Fibonacci relationships don't work it's usually because an extension is dominating price action. Understanding how extensions work will be the difference in helping you develop from being an average trader to a good trader. It can also be the difference between having a good understanding of charts and a great understanding.

## ■ Countertrend Extensions

The butterfly or Gartley pattern was made popular by Pesavento (128). Here we apply variations of the concept and streamline it to many corrective moves. A lot of what is presented in this chapter is slowly being understood by the Elliott community. Those of you from other disciplines should be made aware of it. These examples are natural, universal occurrences. It will make a large difference in your understanding of financial markets. The reason there are different annotations on these charts is as I've refined this over time, I kept adding and adding as I saw more examples. We don't need to have the strict specifications of the butterfly in order to see how these patterns work. Some of these calculations are completely cutting edge as you will see in the case of measuring the extension off the breakout of a triangle.

Does this chart in Figure 8.1 look familiar? This is virtually the same chart we looked at near the end of the last chapter. We looked at this chart to be able to recognize a near-term low at the 4.23 extension level at the July low. I've added trend lines to this chapter to illustrate this key concept. Our first example is labeled 1-2-3 and is the trend line from the final leg up in March to the April high and down to the late May low. What we have is line 2-3 at approximately 1.618 the length of line 1-2. The lower tail dips slightly below the 1.618 extension and becomes the first major low of the down trend. I'll show you other examples of how that very last leg will morph into a 1.618 proportion on the first leg of the new pattern. For now, check out these proportions. Now look at 3-4-5. See how lines 4-5 are roughly  $1.618 \times 3-4$ ? If we didn't have the emotional reaction near the pivot low it could have been a perfect 1.618 relationship. Now look at 6-7-8. This is the same relationship. Why are we not measuring from 5? This works likely because 6-7 is the final leg of an ABC up and it is in direct proportion to 7-8, which may very well be the first part of a new move to the downside. We don't know that because this chart is in real time progress as this book was being completed.

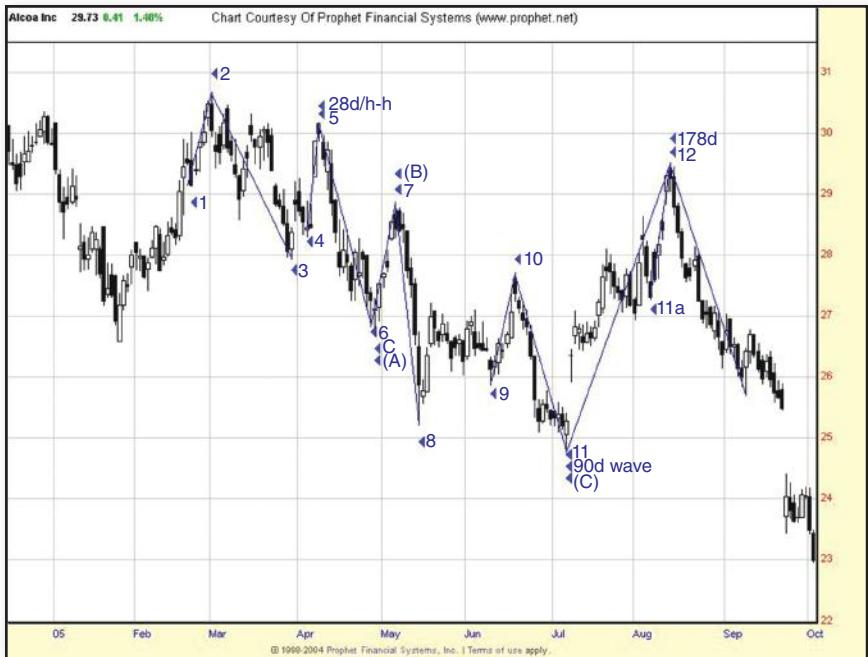
How useful would it be for your own pattern-recognition skills if you knew the approximate capability of the next leg down as a correction was just completing? We had that exact condition two times on this pattern. This sort of thing happens every day on every chart. Before we go on to the next chart, go back to the end of the uptrend. Check out B-1-2 at the end of March. B-1 has the 0.618-1.618 relationship with 1-2 up. Folks, that calculation caught the final top, did it not?



**FIGURE 8.1 Last Leg Up Extension**

We looked at a variation of the chart in Figure 8.2 in the last chapter as well. We are looking at one 90-day corrective segment of Alcoa (AA). See how many of these little pullbacks fuel the next leg of the pattern? Is it any wonder why oscillators such as RSI and MACD work so well? They are not shown here, but what these oscillators do is approximate the proper level where overbought or oversold will signal reversals in any degree of trend. This is precisely why markets don't go in a straight line. It's the corrections in bull or bear phases that fuel the next leg in the advance in perfect precision. When does it end? We are deep enough into this book to realize that intermediate legs take anywhere from 61 to 89 days to complete. In this case we get a larger reversal on the ninetieth bar.

Breaking down the action we see lines 1-2-3. In this case, line 1-2 is the very last leg of a bull phase and sets up a choppy five-wave progression for 2-3, which measures  $1.618 \times 1-2$ . The next progression that works is 4-5-6. Leg 4-5 is the final leg of a small-degree ABC up and sets up the next drop until the end of May, which also measures 1.618. The next corrective wave lasts a full month. Final leg C once again refuels the next drop to the ninetieth day of this leg, which once again is 1.618 (10-11) of 9-10. For the



**FIGURE 8.2** Countertrend Extensions

bounce, leg 10-11 has a direct proportion of  $1.618/0.618$  with 11-12. Why might this information be valuable? Armed with this sort of pattern-recognition scheme you may be one of the few people playing Alcoa with this information. As it rallies, we see that it takes out the 61 percent price retracement of the 90-day leg down and the 1.618 target of 10-11 is the exact 78 percent retracement level of the move down (see chart in prior chapter). Right on the gap up you can have an idea that price action is going to take out the pivot high at 10 and you may be the only person playing this chart that knows this information with greater certainty.

What else does this information do for you? We've spent a great deal of time in this book outlining points in time where we would be looking for the 61 percent retracement level as a point for reversal. When we project this method of relationships to the overall price retracement of the leg down, we see a cluster forming at the 78 percent level, not the 61 percent level. We can then relax when the 61 percent is taken out. When we get the reversal at 78 percent on the cluster, we know we have a very high-probability trade to get short again. Finally, check out 11a-12. If the chart did respect that high and reverse on the 78 percent retracement we know we'll get at least

a 1.618 move in the opposite direction. If we went short again at 29, the probability is we will get a drop to 26. Considering the high was 29.50, a 50 cent risk with a \$3 profit potential gives you a risk-reward ratio of nearly 6 to 1, which is outstanding. If all you did was outline those kinds of setups to trade, you would do very, very well.

Once you recognize this as a high-probability repeat pattern, you'll come to realize it is a swing trader's paradise. What do swing traders look for? They are looking for trades that last anywhere from three days to three weeks. In this five-month progression you have no less than six good setups. This is only one stock. If you want to get more precise, you combine this technique with our time factor.

Just to show you the last chart was not a fluke let's revisit the Amgen chart from the last chapter in Figure 8.3. This chart is a variation of the second wave correction we saw prior to the big leg up in 2005. Check out the relationships from 1 and 1a going down to October low, which is 2, up to 3 and 4. In the short term 1a-2-3 is perfectly proportioned as is 1-2-4. Line 1-2 actually gives us a larger target once the October low is in place. Recall once again the October 2004 low was a major pivot and started the



**FIGURE 8.3** Amgen Countertrend Extension

presidential rally. Is it really possible that while we were in the first leg up between 52 and 57 we could make a projection for a high near 65? It doesn't work every time but the theme of this book is this isn't the tooth fairy but tendencies do repeat more often than not. I challenge you to look at charts right now (not in this book) and find similar relationships for yourself. Don't take my word for it. Do your own due diligence. Apply these principles and start to simulate the results for yourself over time. I think you will be pleasantly surprised.

From the January 2005 high to the April low (another key pivot) we had a pullback of 54 days. You can see that lines 3a-4-5, 5-6-7, and 7-8-9 all work with perfect precision. On the way up line 10-11-12 also works perfectly. I haven't outlined them, but there are even more relationships exactly as I've described that work the same way.

The whole point of this exercise is to show you a different way of looking at the charts as opposed to the way classic Elliott has been taught over the past 75 years. The theme for forecasting as well as projection targets for trading can be seen in the corrections. What I've shown you thus far are not iron-clad rules. They are guidelines and should be taken seriously. This is a chapter on advanced techniques, although I'm not really sure how advanced they really are. What I mean by that is classic Elliott has taught that advancing waves are the only ones that have relationships to each other. This is simply not the case. These relationships have been on these charts since traders have been looking at price charts. However, only the smallest minority of the trading community are aware of how these relationships work.

What I've noticed is that corrective waves in a larger trend will give birth to waves that measure 1.618 or 2.618 the size of the correction. This isn't necessarily the end of the trend because what you will see is another small retracement leg that gives birth to a final leg that also has this type of relationship.

Here is a chart of Cisco (CSCO) in Figure 8.4. Check out lines 1-2-3. This is a move that bottoms in October. As you can see, the target price for the entire move until April/May of the following year is driven by the final leg down! The final high in April and May, which is a double top, is actually a 2.618 extension of that last leg down. Later on in the move we have lines 4-5-3 where the final leg 5-3 is also a 2.618 relationship to corrective leg 4-5.

At this point, I'd like to introduce another concept that I don't think is relevant enough to merit a chapter on its own. There are many instances on a price chart where the length of the move is going to equal a Fibonacci/Lucas number or some derivative of them. Line 4-5 retreats from 19.43-17.82 for



**FIGURE 8.4 Cisco Countertrend Extension**

exactly 1.61 points. In terms of time, point five is the seventy-fifth day of the trend and the double top around point seven hits on day 112 and 25 days later (137) which is a 37-day leg (38-1) and day 62. Everything has a perfect symmetry to it.

On the downtrend, legs 6-7-8 is the last leg of the uptrend (6-7) and the May high takes out the April high by less than one cent! Line 7-8 is a 1.618 extension, which takes us conceivably to the end of an A-wave down.

The next example is Figure 8.5. You can make a case this leg is an ABC correction or even a five-wave impulse. It's irrelevant. If you look at a larger chart it could even be a larger-degree A wave in a multiyear sideways pattern. I'm mostly concerned about lines 3-4-5. The July-to-September pull-back fuels that final leg up where line 4-5 is a 1.618 extension of line 3-4.

Also, line 1-2 as the final leg of May-July corrective phase gives birth to 2-3, which is a 2.618 extension. There are several points to note that are important. The entire leg from April to December retraces a larger leg down that is not shown in its entirety. This leg up does not have a common Fibonacci retracement level with the top at 97.67 on December 31, 2004. If you take a very close look at these legs, they don't have any other common



**FIGURE 8.5 IBM Countertrend Extension**

interwave relationship taught by traditional Elliott. If they don't have any traditional relationships and since it didn't turn according to any retrace-  
ment level, how can we possibly target a high?

We can certainly do it with the time factor. As you can see, this pattern has excellent time relationships. Near the end of June, the bullish rotation and the money move kicks in on the forty-eighth bar (Lucas 47+1). The parabolic leg misses day 62 by one, but from there we bottom on day 111, which is another 48 days and we top on day 156. However, without some mechanism to target a price high in advance, we are just like everybody else and you have no edge over the competition. Notice the price point of where we do put in the high. It's in the 89 area and that's a Fibonacci number, right?

You may be asking yourself, what is the real value to this technique? Is this just some academic scheme to look at charts after the fact to see how it turned out? I trade these charts as well and know very well what is realistic in real time. Here's my take.

Go back to the end of June where the chart turns up on day 48. We already know from the chapter on rotation that we have a nice white candle after a choppy sideways move on the exact right time bar. What we don't know is how far this move can go. Once we clear through the May and June

congestion we can project a 1.61 extension with the first leg off the bottom. This projection gives us a general area near 83. Look at the April to June low-to-low cycle. It isn't really clear if we have a complex sideways pattern or a small series of ones and twos. As you can see, the final leg of the pullback works perfectly with the next leg up. It goes slightly beyond the traditional Elliott target and nails the target for the high right on the head.

Turning to the next leg up, we are really in the dark as far as projection goes because the chart tops in a very confusing place. The real value of this methodology comes when we retest the 84 area in November: Can we really make a projection based on the pullback that this chart has a very strong possibility of topping in the 89 area. Armed with this knowledge, it would have prevented you from initiating a position as no doubt sentiment must have turned very bullish once we go into the upper 80s. You would start to keep a trailing stop that would let your winner run if you were already in the stock. Once it turns down, if you haven't already been stopped out, when you see all of the relationships lining up you may want to consider going short.

This is not an academic exercise. What we have here are additional tools in the arsenal to help us understand what is actually driving these charts. With greater understanding, your decision-making possibilities are driven less by emotion and more by discipline. We've spent the majority of this book preparing ourselves in advance for turns based on the time factor. Now we can combine the time factor with an intelligent projection technique that is driving these charts. You have an incredible edge over other players who are trading these charts.

The chart, in Figure 8.6, shows a five-wave progression in Arch Coal (ACI). As you can see, there is a slight overlap on the top of the fourth wave (07/03) with the bottom of the first wave (05/22). Does it really matter? The point is that leg 2-3 is a 1.618 extension of correction 1-2. The point is that leg 5-6 is a 1.618 extension of leg 3-5. None of the traditional Elliott relationships work on this chart. For good measure, small leg 4-3 does project the top of the fourth wave at price point 44 as another 1.618 price extension. Since that doji hits on day 39 off the top, it does make an excellent short if you know what to look for.

At the low, we don't have a perfect number of days to the entire leg (51), which may mean this progression is only part of a larger move to the downside which is still in development but the candles are suggesting at least a low and the possibility of a small swing trade long as the fifth bar off the bottom is a nice white engulfing candle. If you took the gap up the next day and rode it for a couple of days, you likely caught at least a couple of points



**FIGURE 8.6** Arch Coal Countertrend Extension

as this chart now projects to 42 based on a 1.618 relationship with the last four bars down from the week of July 17.

Figure 8.7 shows us more of the same. This time the subject is Biogen (BIIB). Briefly, from September to October, line 1-2 projects a potential high at three in January 2006. In this case, it so happens we do have a common



**FIGURE 8.7** Biogen Countertrend Extension

interwave relationship as the December to January rally has an approximate 0.618 relationship with the October-November leg. Leg 1-2 with its projection as far as 48 gives us advance notice of where third leg up in the sequence is going to end as opposed to an extension. Line 4-5 also projects a top at three. This is a good cluster and sets off a five-point ABC sharp drop. But the pattern isn't done. The leg to the February low has common Fibonacci relationships as the C leg is  $0.618 \times A$ . We have common Fibonacci relationships mixed in with the advanced techniques. Nobody said this is a piece of cake. As we can see, the January high is taken out at the end of February to point eight, which has perfect precision with line 6-7. Finally, the turn comes and we have a progression from points 9 through 15, with every leg perfectly related to its small-degree correction along the way.

Here is a wonderful example of a great setup, in Figure 8.8, with Starbucks (SBUX). We measure out the correction and see the extensions. This chart bottoms out at a 2.618 extension of a B or second wave. I'm starting to put Fibonacci extension lines in place of the straight lines in the past few charts. You can also see the whole trend off the top completes in a perfect 62 days. Obviously, not all setups are as clean as this one. However, when you



**FIGURE 8.8** Starbucks 261 Extension

see something like this, you should go for it 100 percent of the time. Not only will you be getting into this stock at the highest possible risk-reward ratio possible, but this can't be beat as far as pattern recognition goes.

What is also worth mentioning here is the other principle of the relationship of final waves to first waves. Check out triangle 1-2-3. As you can see, the final leg up, which is 1-2, has a 0.618/1.618 relationship with the first leg down of the new trend. By the way, the first leg down completes in 13 days. Let's say you went short at the top. Armed with this relationship, when you see the first leg hitting and reversing on the target, is this your clue to take your profits? When you see this happening on the correct number of days, bells should be going off in your head to take your profit. Want to get back in for the best part of the move? Check out triangle 4-3-5, which starts near the end of May and you'll see lines 4-3 (hard to see) has a 0.618 relationship with 3-5, which is the B wave. If nothing else, that is your pattern-recognition clue of where the B wave might end. Remember, looking at these charts in real time is very different from seeing this after the fact in this book. Once the correction is over, you can do your drawing extensions to see the potential of the down move. Could it have ended at the 1.618 extension after day 60? Absolutely, this is an art and not a science but you didn't get a really good reversal on day 61. You needed to see more in terms of the candle, which as a harami doesn't even cover half of the black candle the day before. Day 62 brought us the gap down to the 2.618 extension target. As you can see, day 62 was a big white candle which implies the gap from day 61 fell from just below 33 all the way to 29 on the open and moved up right from the start. Other traders likely had no idea what was going on.

Pay attention on the next chart, in Figure 8.9, to the B or second wave of Yahoo from June to September 2005. As you can readily see, the corrective wave has an exact relationship to the top. You can do all of the standard inter-wave calculations that we've done earlier in this book and none of them are going to work, as the low in February 2005 to the June 2005 high has no obvious relationship with the September low to the top. This chart represents the gap in Elliott I spoke of earlier in this chapter. So why didn't I just cut out the first 100 pages as well as the first 75 years of Elliott methodology? They work also and you can read about traditional Elliott elsewhere. My job here is to take you to the next level. They also set you up with a very good foundation for understanding this part. Also, if you were not taught all of the basics, you would not appreciate how advanced some of these techniques really are. I am a trained Elliottician as well, and I went for years using basic Elliott calculations before I stumbled into this methodology on my own just



**FIGURE 8.9** Yahoo 161 Extension

like I did the time sequences. Speaking for myself, I have a whole new appreciation for the material in this chapter simply because I spent years doing it the old way. On a time basis, the first leg up is 72 days (half of Fibonacci 144). The pullback is 74 days but ends on Lucas derivative 146, which is also Fibonacci 14.6 percent. The final leg up is 75 days and rolls over on Lucas 76 right on the 1.618 extension point.

Here's an aside that has nothing to do with these calculations or cycles. At any point during 2005, if you called your broker and asked what their financial analysts would be calling for as target prices based on the fundamentals of the company, what do you think they'd tell you? You would get nebulous numbers based on multipliers of optimistic earnings projections or P/E ratios. Am I right? Would they be able to give you any idea when you should buy or sell this stock? The funny thing about all of this is that just when the correction would be ending, they might even put out a sell signal on the stock. Once that final leg up kicked in along with the rest of the market how many of them would be able to pinpoint a turn at 43.60? For that matter, how many other traders would be able to make that projection? Not many, I'm sure.

## ■ Triangle Extensions

Here is another concept that shows great promise. We've all been taught that when you take the thrust measurement for a triangle you can make a high-probability projection target for the top. You know and I know this doesn't always work. It works mostly in fourth waves as a projection for the end of the fifth wave. However, what happens when the triangle kicks in as part of a B wave in an ABC sharp move. Many times, we'll have an A wave which retraces 38 percent of the preceding move. Does that sound right? Sure it does. What happens when we get a triangle for the B wave? You know there isn't a lot of room for a thrust measurement since we can't take out the prior low, can we? Don't we also see many C waves that retrace more than 61 percent of the leg they're trying to correct? So how can we make a projection for a high?

The answer might lie on charts like these in Figure 8.10. We have a seven-month triangle that absolutely blows the thrust measurement calculation out of the water. Look very carefully at what I've done here. I've measured the correction from the start to the end. Let me say that again. See the high above 3800 in early March 2005? Instead of measuring from



FIGURE 8.10 Triangle Extension

the high to the low, I measure from the start to where it looks like the E wave is ending. In this case, it's marked at day 159 because it breaks out in day 160. When we measure from the start to the end, we can see where the extensions fall. In this case it blows through the 1.618 and 2.618 extension points. When the 2.618 extension is taken out, there is your clue to look for a 4.23 extension. As you can see, it tops right there! I can assure you it's not a coincidence.

Now look at the last spike up in the entire move just above 4600 in May 2006. This leg is a perfect projection for the end of the first leg to the downside after the reversal. It nails it almost perfectly on the twenty-first day of the trend. As we measure the B wave after the top is in and a good projection for the trannies would be near that smaller 2.618 extension point above 4000. By the time this book is out we'll see just how close we get.

Does this work on other time frames? Here's an hourly chart of the SOX in Figure 8.11. As you can see, once again I've drawn the lines to cover the start of the triangle to where it ends, not the bottom of the correction. You can see we get a small-degree trend change (it's a small-degree triangle) at the 2.618 extension point. The leg is also 18 hours up.



**FIGURE 8.11** SOX Triangle Extension

## ■ Larger-Degree Projections

The final few charts of this chapter scrutinize some larger-degree projections. Figure 8.12 gives very good projections for the 2006 bear phase. On this chart we have two projections as seen from the high and major secondary high. Check out the larger set of lines that line up with triangle lines 1-2-3. This is the last leg up of the rally phase and where the larger 2.618 projection line falls with line 2-3. Now, check out the correction in March to April 2006. This lines up with the retracement lines and triangle lines 4-5-3. You can see where the these lines project. The point we bottom at is a cluster of the two price projections along with the sixty-second day of the C leg.

This chart highlights several of the principles we've discussed in this chapter. First is the concept of corrections driving the price action. Also we have a cluster where the last wave of the old pattern projects a target for the new pattern. As you can see, the last wave concept should be used as a guide simply because we really don't know if it's going to project to the bottom of an A wave or the bottom of something much larger. Unfortunately, we don't have the answer to that. All we know at this point in time is that the relationship of the final leg is



**FIGURE 8.12** SMH Projection

going to be meaningful in the new trend. However, this methodology becomes very useful by the time we get to June and July 2006 as we can get a jump on the competition to pick a place where there will be a high-probability low on this particular chart. As you go through these charts understand at first it will be a bit confusing. However, the more you work with this concept you will see the application and how precisely this method works on a variety of time frames. For now I want you to just get familiar with this concept.

Finally, here is the chart of the NASDAQ bear market from 2000 to 2002 in Figure 8.13. The ultimate B wave of our time spanned from May to July. There was a retest close to the high with the failure in September. I've drawn three sets of retracements. The first is the larger pullback from that summer and two more from early 2001. What this illustrates is that when we take either a 1.618 or 2.618 projection from the top of these corrective waves within the larger trends, we come to a close estimate of where the final bottom actually traced out. When we take either the 2.618 or 1.618 extension of these various rallies we come up with three target prices for a low: 1181, 1025, and 1214. The final low was 1108 and all three are within 100 points of the final bottom give or take a few points.



**FIGURE 8.13** NASDAQ Bear Projection

This methodology actually gives us a better estimate for the low than traditional Elliott calculations. If we take traditional Elliott calculations, we take the top at 5132 and subtract the May 22 low of 3042 to yield 2090 points. When we apply the 1.618 extension to that figure we get 3381 points, which subtracted from the summer high of 4289 yields a final bottom at 908. Each of our three cluster points gets us statistically closer to the final outcome.

Along the way you can see the 1.618 extension of the B wave took us exactly to the January 2001 low. If you recall, that was the exact point in time where Greenspan announced a surprise interest rate reduction which wasn't at a scheduled Fed meeting and whoever was short at that point in time was the victim of a very intense bear market rally. Not only did this technique give us an excellent estimate for the bottom, it also gave us advance warning of a potential sharp reaction in a bear market at the April 1 low on the 1.618 line. I haven't included all of the relationships on this chart but there are other instances where the 1.618 extension of correction caught smaller-degree bounces along the way. Do you still believe that news events rule the waves, or do waves and their calculations somehow manifest news events at precisely the correct point in time on a price chart?

To conclude a chapter on advanced calculations, I'm going to change gears and show you some really advanced calculations. This next case study falls under the category where we really don't know the ending. But it certainly is interesting to see how we've come to this point. I've included this study on BHP because it is a very important stock that is traded both in the United States as well as Australia. But there are some important lessons to take from this study. I'm going to show you the progression from the bottom on a weekly and monthly time scale. This is the NYSE version.

There is nothing special about the first chart in Figure 8.14. All it shows you that from the bottom to the steepest correction since 2001 is a total move of 89 months. It gets more interesting when we scale down to the weekly charts. The second chart highlights the first stage of the move. You can see we have some good time relationships. The highlights are a pivot in week 47. The first major pivot is in week 57, which doesn't mean all that much. I haven't done a daily count back that far, but  $57 \times 5$  is 785 trading days, one shy of derivative 0.786. If we subtract for holidays, I doubt that is going to be the precise calculation. However, the pullback ends on the one hundred forty-fifth week of the overall trend and 88 weeks down. This chart gets even more interesting when we add the information up to 2007.



**FIGURE 8.14 BHP 89 Months**

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Basically, what happens is this chart tops in the three hundred eighty-seventh week, which doesn't appear to be very significant.

However, here's what happens when we throw in some calculations that are beneath the surface. The bottom of this chart is at 4.6181 and the wave one top is at 10.841 according to my data feed. That gives us a range of 6.22 points. The wave two low is 6.48 and the 2006 high thus far is 50.74, which give us a range of 44.26. When we divide 6.22 into 44.26 the result is an extension of 7.1157. That means wave three is 7.11 times the length of wave one. When we add in the time calculations we have a 57-week first wave and a 242-week third wave. When we divide 57/242 we get a 0.2355 ratio (just shy of 0.236 or a 23.6 derivative) and a 4.24 time extension, which is a hair beyond 4.23.

Finally, at press time we had a 35-week correction where prices elevated, but when we add 35 to 387 we get 422, which is also one shy of a 4.23 derivative.

These are just a few of the calculations that are hidden in these charts in Figure 8.15. These last calculations I've given you would be very difficult to trade, which is why I left them out of so many of the other charts in this



**FIGURE 8.15 BHP Internals**

book. However, if you are looking for an edge to confirm a potential intermediate-term change of trend, digging a little deeper to come up with these kinds of calculations will help you realize there is something larger going on. If the calculations don't just jump out at you, this sort of detective work usually will produce some kind of completion.

It is the completion we are looking for that shows us a trend has likely turned and you should be able to figure this out before price action gets to a moving average. When you see calculations in clusters of both price and time that resemble Fibonacci or Lucas derivatives, this is a strong indication something important is going on. It all depends how deep you are willing to dig.

I think you are starting to get the idea. While I haven't included them, there are also excellent examples on both the Dow and S&P 500 bear market charts from 2000 to 2002. Those charts were choppier than the NASDAQ, and in quite a few instances the exact point where an intense bear market rally would commence could be anticipated in advance in terms of both price and time.

How do you put all of this together? The theme that I've discovered is nothing works all of the time. Why? I couldn't tell you. You should continue to look at common Fibonacci interwave relationships. Realize, from what

you've seen here, they don't always work. When they don't, now you know why. By all means, always keep track of the corrections because interwave relationships tell you where a chart can reverse. Time relationships tell you when. Some setups are obviously better than others. The very best setups can be seen on the Starbucks chart and also on the SMH chart.

The whole idea of this work is to reduce the subjectivity of Elliott as much as possible. I feel this chapter goes that extra mile and fills in many of the gaps not filled before just by the time dimension alone. Is this a lot of work? Sure it is. You could also spend a lot of time and energy not doing the right things. Here, at least you will have the understanding of what is really happening. You will be able to recognize patterns exactly for what they are and take advantage of them.

Realize that many setups are not going to look like Starbucks or the SMH. That is precisely why you want to use all of the tools presented up to this point. There is always going to be some calculation or some tool that is going to help you recognize the pattern better than the competition.

What you should take away from this chapter is common Fibonacci/Elliott interwave relationships do work. When they don't work we need another methodology or we will be lost. I want you to start training your mind to look at charts not so much in terms of the advance, but in the relationship of the correction to the advance.

With some practice you will be able to make more accurate target projections that are weeks or months down the road. If we are in a powerful trend and the 1.618 extension doesn't work, have confidence we are going to the 2.618 extension, or the 4.23 marker. Sometimes they will defer to the common relationships you've worked with for years. Other times they will all cluster together.

The whole idea of this book is to look at charts in new ways that you've never done before. I could never look at another price chart without keeping track of the bars. However, if you only keep track of the bars in real time you will see charts elect to bypass important numbers. As we covered in the time chapters, you've been in a position to see that important number bars are passed. Why? I think we've answered that question is this chapter. Corrective legs which act as Fibonacci percentages do act as magnets. As you learn to do these projections your precision will grow exponentially.

In closing this chapter I've covered everything you need on a technical basis. The rest is up to you. The most important psychological trait you will need to make these tools work for you is patience. When I first started trading this methodology I got stopped out a lot. I would anticipate the time bar and take

the trade. Many times it didn't work. There is no use in presenting you with a methodology that doesn't work, no matter how nicely these time sequences work out. It is only when I began to wait for the candle formations to tell me they would validate these time and price clusters on a chart did things change for me. If you don't know anything about Lucas Waves or time sequences, it's one thing to try to put on a trade. Without the knowledge of this new language, one spot on the chart isn't very different than another spot.

When you start working with the time sequences you will become fascinated that the chart actually did what it did. You will become so excited your first inclination will be to start pulling the trigger all over the place. Don't do it. Wait for better-looking setups. It's tough to have the patience to wait. Your natural inclination is to think you are going to miss a big move. So what if you do? There are always more opportunities down the road. It's better to get a good setup and protect your bankroll than to bleed the account on mediocre setups. Draw your extension lines and keep track of the bars. You will come to anticipate a turn on a 47 fifteen-minute cycle if you are an intraday trader. You will anticipate the 61-day cycle turn if you are a swing trader. Don't take action until you see the candles confirm your various price and time cluster points. When things do line up, absolutely pull the trigger. You are seeing what you are seeing. You will come to trust the chart and the methodology. When you do pull the trigger, have the courage of your convictions to stick with the trade. What starts to happen over time is you are going to have lots of fun! How do I know? All of this has happened to me!

Since the last edition I sat down with many kinds of Fibonacci calculations and as you can see the extension can be very valuable. But I wanted to fill in some of the gaps that have less to do with timing and more to do with the shape of the pattern, so we added a few examples to point you in another direction and inspire you to find some of these relationships on your own.

## ■ **Fibonacci Leg Calculations**

What I'm going to show you are high-probability relationships between legs that will help you project the size of patterns based on Fibonacci and measured move calculations.

For those of you who like Elliott, you should love this because it's more reliable. I'm a big fan of the A wave and have found several applications. In Elliott terms, in a five-wave sequence you get one or A, three, and five as the major moves in a leg. The common relationship most talked about is there

are variations is one or  $A=0.61$  of three or C, with five also being approximately 0.61 of the biggest wave. But that leaves a lot of subjectivity, and the more subjectivity there is the more you have to think and the more you have to think the less confidence you have when it comes to making a trade.

So how do we simplify that? Simply put, double the A wave. That's right. It's a measured move where the A wave is half the leg and the distance beyond there is used as a target to double it. There are variations I can't get into in just one series of tutorials, which is why I suggest you take it slow, give your brain time to recognize the pattern, and allow the neuropaths to develop. It might take you a couple of months for the light bulb to really go on. So let's talk about this chart.

Many times we don't get exact perfection so don't look for it. A very close approximation is what you are shooting for. Look at the first sequence in the EUR-USD in Figure 8.16. We get an A wave off a high which just so happens to be in the place at the top of the channel where institutions like to sell. But look at the low. It's a close approximation for where the bottom materializes. Why is that a good place to take a trade? First of all it's the double A, but it's also the bottom test of the rising trend line *and* it's a retest of the prior low. Remember what I said about support information. The next move up is a variation, because this doesn't work on *every leg*. Look at the center of the chart. We have an ABC up where the A and C are equal as measured from the bottom of B. The third example on the right with annotation double A is another double A measured move that spells a turn and short trade. This low works as it is the next test of the trend line.



**FIGURE 8.16** EUR-USD Relationships



**FIGURE 8.17** NQ Double A

You can use this tool and look for tests of key lines, have the double measured move give you a decent calculation. You should never take a trade based on only one piece of information. You always need at least two. But the idea and takeaway for now is if you see a double A and it starts to turn, you'll know why and it will at least give you a short-term profitable trade. You'll feel more confident at pivots and it will open up more opportunities to you that you didn't have previously. Realize however the when you do take a trade off, a double A pivot chances are it going to be a turn which means you'll be trading the A or first wave in a new direction. I don't advocate picking tops or bottoms unless you are really skilled and this will certainly help with your skillset. But realize that first legs in new directions are not the biggest moves, so don't get too comfortable.

The next chart, Figure 8.17, is a five-minute NQ where the double A gives you an important turn. It just so happens that in the first instant it is likely short covering so it never does stop. That might be more luck than skill. In the second instant, it backs off resistance, which you may or may not want to sit through and is more representative of what you'll see on a regular basis.

Everything has its caveat. So if you can be flexible you'll find more opportunity. Let's take a look at a couple of conditions on the gold chart in Figure 8.18.

Here is a situation where a double A didn't work. Make a small adjustment and find that the arrows give you two legs each of 21 points which enable A=C. This is not an Elliott Wave because they have stricter guidelines. Who cares about getting the right wave count? Don't impose your will on



**FIGURE 8.18** Gold A=C

the market and try to tune in to what it's telling you. Here I've included the Gann readings, which are presented in one of the new chapters and also work at 72dg. We have the legs for a measured move, Gann and approximately 47 bars down. There is also a larger trend line that is not shown in this example. We had every element in place.

In this next scenario in Figure 8.19, we also have an A=C scenario which also works with the Gann square of 9.



**FIGURE 8.19** Gold A=C Part II



**FIGURE 8.20** 61 Symmetry

Once again another ABC up where A=C again. It's not perfect; it misses by a few ticks but it's close enough. The Gann reading works at 181.8, rounding to 182. The next example of the greenback is fairly advanced. For years I didn't pay attention to examples like these and didn't put it in the original version of this book because the calculations are very close approximations. They are not exact but close enough.

What I want you to focus on is that little complex correction in the middle of the screen in Figure 8.20. After a big drop where there was a selling climax you have to consider very strongly there will be an extended ABC going the other way if no other reason to reset the oscillator occurs. Bears get in a lot of trouble *not understanding* that after fear drops like a rock, which happens quickly, it takes a while to get the selling going again. The only time we get one selling climax after another is during serious bear phases. You'll know if you are in one. One of the kinds of charts you can get greedy and look for such a thing these days has been Nat Gas. Most other charts exhibit normal behavior.

You have to be open to the symmetry in these countertrend moves. Here we have three legs in the center of the chart. Each successive leg is a very close approximation to a 0.618 of the prior leg. Ideally after a climax you are looking for three pushes, but in a strong trending market two will be enough. What I'm calling a 1.618 of a leg in fact might be a little off. It could be 1.64. These 0.61 legs are a little off but close enough.

In the next chart, I highlighted another A=C pullback in Figure 8.21.



**FIGURE 8.21** Dollar A=C

Finally, this is a very complex winding correction in Figure 8.22, but the C leg is 0.618 to the whole. I think most people make their mistakes in the correction and on the breakout. Since lots of breakouts tend to fail the idea is to get some completion in terms of the leg relationships before waiting for it to break out. In this chart there are four bars at the high. The only tell the market is giving you is the C leg calculation. Some traders who don't know Fibonacci may attempt to buy a breakout. This is why my personal preference is not to pick tops or bottoms unless you are really sure. In this case, it



**FIGURE 8.22** 61 to Whole

finally starts dropping after the four bars, and you can justify the fourth bar that is bearish to be a failed retest of resistance.

Even with this test, if you are anything other than an intraday player you have to endure heat. After the small c high and drop you had to sit through yet another retest of the high which failed, before the big move. If you are in early, you have a much better chance of withstanding a comeback because he who gets in late has no staying power and usually exits early.

There's always analysis because one has to figure out if an edge is there. Why do you think Las Vegas spends all that money on computer systems, lighting, putting the games in the right place, and everything else that goes into gaming management? It's simple but it's not easy. Same thing goes for trading. If you are looking for a spot on a chart where you can just buy it, this is the wrong business for you. We've discussed that the key to success in this business is realizing the best we are ever going to do is manage uncertainty. This is a nonlinear world where nothing is guaranteed and while patterns are similar, like snowflakes, no two are ever alike. You just have to get used to that. There are tendencies and we've seen that the higher-probability ones that appear over and over are the Double A, the A=C and the 0.618/1.618 relationships to each other. From those groups you get the vast majority of relationships. To be sure, every so often you get an outlier like the one we had one morning on the NQ.

This is rare, but in Figure 8.23, it happens every so often you have to account for the possibility. In this case we had back to back 2.61 extensions,



**FIGURE 8.23** Double 261



**FIGURE 8.24** A 61 to Whole

but it ended up being the low for the day. Each leg here had the smaller C or third being a 2.618 extension of the first leg in the pattern. When it finally turns you have to figure out what happened to determine if the low is any good. The bottom line is, if you don't understand it, don't trade it. Plain and simple. Luckily you are not going to see this every day.

But here's what you do see.

Here's an ABC up in Figure 8.24 where the A is approximately 0.618 to the whole leg, which ends a spike in a downtrend. It helps to be supported by first resistance, which was the small-congestion area prior to the low which it cannot take out. So the new downtrend starts and unfortunately it comes right back up on you to retest the high at C. These legs are related to each other as mentioned below and as it turns out the bounce leg, while not perfect to the tick, is a very close approximation to the size of the original A leg. Keep that in mind.

The next chart in Figure 8.25 is a pullback. This time it's close, but C is an approximation of 0.618 to the whole. The A or C can be 0.618 to another leg or the whole. Finally, the C is also a close approximation of that last leg up at the top. It certainly helps as a guide when you really have little else to go on. On the Aussie dollar, two charts, two different trends, but similar type conditions exhibiting that while no two patterns are alike the tendencies are very close.

Here's one from last year in Figure 8.26, it's the November leg leading down to the Santa Claus rally. Another typical ABC bounce in an intraday



**FIGURE 8.25 C 61 to Whole**

downtrend. We see the A leg turns out to be a close approximation for 0.618 of the whole which is the high. Take the A on the bounce and you'll also see a variation where after the high, the first leg down is 0.618 of that old A.

In Figure 8.27 is the same NQ wave just a couple of days later. This time the C is 0.618 to the whole. You know Elliott's Rule of Alternation? There they tell you that one correction will be a sharp, the next a flat. Don't worry about that. Just look at the relationships. As you see if you have a big leg and



**FIGURE 8.26 A Approx 61 to Whole**



**FIGURE 8.27 NQ C 61 to Whole**

one has the A highlighted, chances are the next one in sequence will be the other way around with the C highlighted.

Your takeaway is each time it's a little different, but for the most part we are dealing with similar tendencies. Also, especially on intraday charting you won't get that exact/perfect precision where its 0.618/1.618. It will be a little off. It could be a few ticks off. You have to get used to dealing with an imperfect world. In the times that you will get perfection you might consider staying with your trade a little longer because it will tend to go further than you think. The better the precision, the better the turn.

For this next sequence in Figure 8.28 I want you to be aware of how many legs in a sequence have a relationship to each other. If you are looking for a pullback in a bull or even attempting to find a high, the answer is generally going to be found in the data that led up to that point. What I mean by that is leg relationships tend to repeat and the sizes of the legs tend to repeat over and over in a single sequence. Let's look at one intraday wave so you can see what I mean.

Here we start with a small starting leg which I'll call x. When we take  $1.61 \times x$  we get the next high. Then after a short pullback we get another leg which happens to be the same size as the prior  $1.61 \times x$  portion. That whole leg I called A. Then we take  $1.61 \times A$  to the get the next high. Then we take the first bigger pullback which I called Z. Z is the same approximate size as A. After the Z low we get a new first leg up which is in essence an A wave but I called it V.



**FIGURE 8.28 NQ Multiple Relationships**

After V we have pullback leg Y. Y is four points. The next pullback leg is Y1, which is 4.25 points which is basically equal. Then the high itself is a close approximation for a double A and a double V. You'll probably find more relationships in there as well.

These examples are taken from my own tutorials in our newsletters. We've seen all kinds of relationships and on most days it is very reliable, not so much in all days because everything will extend. What happens on these extension days is much of what I told you here this month won't work and you can throw convention out the window. However, these relationships work the majority of the time. In the NQ I've found that in addition to the double A formation, we'll see A or C being 0.618 to the whole working a lot of the time. The challenge here is that in Elliott methodology they teach that the 61/161 ratio is usually waves one through three. In Elliott parlance they are looking for a fifth wave. When you purely look at these kinds of ratios, many times you will not end up with a fifth wave. The only days you do end up with it are on the extreme days where everything tends to extend. But when you see 61/161 either comparing the two legs or 1 to the whole (which is really the Pesavento leg) you'll find good trading legs going in a new direction. Also what you'll find is that in a sequence one leg will be X amount of points. You'll find other legs nearby equaling almost the same amount of points. So if you've seen an A wave and/or a pullback wave equal T points, chances are you will see another leg in the not-too-distant future also equaling T points.

Just being aware of these relationships ought to help you manage your trading better. You'll be able to project ahead to potential turning points and on an intraday basis it will also help you to take interesting trades that look scary but payoff big. If you know that a turn can materialize because it has dropped the same amount of points as a prior leg you have a *huge* edge for several minutes at a point in time where many other traders are thinking and not acting. It could be the difference between you getting a good price and having to chase in a fast market. In the above sequence, you have five different pullbacks that were telegraphed by the data that came before it.

Just so we are on the same page, when you get to intraday charts on small time frames you'll tend to get very close approximations to the classic Fibonacci relationships you are familiar with. That's just the way it is, so I'm using what literary people call poetic license, here it's technical license, because the alternative is not using these relationships at all, which I missed out on for several years by wanting to be flexible. Realize that we are *not* dealing with linear math. This is *not* a precise world, some of the time. Other times you will be amazed by market precision. From what I've found in doing timing work for nearly 13 years is that not all legs are created equal and the better ones, tending to perfection, tend to give the best reactions. But we've all been in a position to see that not all moves are perfect and many if not *most* are from it. But if you wait only for the perfect moves *all the time*, you'll have a hard time succeeding in this business.

So it took me getting trained in Gann to embrace the imperfection of Fibonacci legs. We are managing uncertainty, and to succeed one has to not only get used to it, one has to get comfortable with it, and maybe even embrace it. So what I call a 161 wave may even have a ratio of 1.70. It depends on the market conditions. We are not going to start looking for 1.73 relationships even as it's a sacred geometric number. The idea here is to make money and not have to think too much. If you have to sit and figure out every last perfect calculation on every single leg this becomes an exercise between academics and making money. There's a fine line between the two because you have to do *enough analysis* to figure out where you have an edge. However if you do *too much*, by the time you act your edge will be gone. And if you have to do that, your methodology is useless to the goal of making money.

So once you can embrace uncertainty, if you are still unclear about a leg, *leave it alone*. Believe me, if you are trading intraday chances are it will line up in an hour or two. It lines well at least once a day. If you are trading stocks you might have to wait a handful of days, but something will line up as well.

And you always want to have at least two reasons to take a trade. If you look carefully, when you have two you'll probably find a third.

These charts are nonlinear. This is what Wall Street and the academic crowd can never figure out even though this is their business. How is it that this rally in 2012 materialized? It's very simple but it's not easy. If you think about markets when they are correcting or congesting as nothing more than a period when chaos reorganizes itself so it can reinvent itself at a higher order then you are going to win this game called trading. Markets are moving or setting up for the next move. Each down leg influences the leg up that follows. Each up leg influences the down leg that follows and every neutral market is the chaos reorganizing itself. I know this is complicated so I'll give you a simple example.

This is a morning setup in Figure 8.29. The high when I woke up showed a small double top but, if you look at the legs, the double-top leg had the smallest leg in the recent sequence. *That was the tell*. It's also called a shrinking leg, which may be a term coined by Wiley author Al Brooks. We know that double pivots give you good trades in the direction of the containment. That was the market setting up for the next move. Nobody could know it would turn into a rout. However, take the first leg down at 6.5 points and then the big leg at 30.25 points. What I called a massive 4.23 extension in actuality is a 4.6 ratio. But we know the most popular ratios are 1.61, 2.61, and 4.23. It's an example of how all of this is an inexact science and to trade it one needs to realize the trading part is art and not totally science. The big



**FIGURE 8.29** NQ 4.23 Extension

drop caused a big rally; once again the leg down caused the chaos to reorganize itself to a higher order. So if you are fortunate to catch a bottom you realize that after a giant move like that the reaction is going to be big as well. It retraced nearly 61 percent of the down move in a short period of time before it went to sleep. Now it's reorganizing itself for the next interesting move.

Another part of understanding advanced projections is the chaos in a price chart. Without beating you up with too much complexity, Prigogine discovered that open systems that allow energy to dissipate (chaos or randomness) in order to survive move on to a new higher order version of the system. Financial systems are open systems that interact with the environment. Markets do not trade in a vacuum.

For us, it means that corrections are the chaos. What we are trying to do is better understand the correction. What I've found is that a lot of the mini corrections in a trend have close relationship to each other in terms of size.

You'll see something like Figure 8.30 repeated over and over every day. This is a simple leg up on a recent heating oil chart. It could be just about any chart. I've picked out four pullbacks in this trend. Let me repeat, they may not have exact perfect precision, but they are close enough. The X waves are just about equal and the  $61 \times X$  waves are just that. I realize the second 61 wave is a little off but its close enough. Why is it so important?

This business is hard enough and markets move fast. Remember the Gretzky analogy. The Great One was not the fastest or strongest player on



FIGURE 8.30 61 Pullbacks



**FIGURE 8.31 NQ Pullback**

the ice. He was the best because while most players followed the puck, he anticipated where it was going. That slowed down the action for him and gave him a competitive advantage all the time. What I'm trying to do for you is slow down the action and give you certain points on the chart where the price action comes to you. You need to be aware that pullbacks in trends will be equal or 61 or 161 to each other. When you get a good candle, when the relationship lines up near a trend line you have a greater chance of something working.

So if you are waiting for the payoff, here it is. This is not theory; this is reality. Here's one of my trades from that same general time frame on the NQ. This is also a chart, in Figure 8.31, by a market analyst from Australia who does a lot of work with Gann as well as Fibonacci.

Look at this downtrend. Right after that little wedge up is a down sequence. This requires a lot of patience. I didn't take the first signal because the trend line didn't form yet, but it's instructive to look at the size of the bounce. On the second bounce, the spike was just about the same size as the prior one. It protected the trend line pointing down and gave an excellent reversal bar, so I knew it could have a good chance of working.

The target for this trade was just the lower trend channel and you can't count on it overthrowing although it did and ultimately this was about an 11-point drop in about 4 three-minute bars. You won't get all the points, but you can get your fair share. You don't want to be greedy, it's okay to leave a

little on the table as long as you get the good setup and get the meat of the move, that's trading. It's also scalping. One more thing before I forget, this is especially for those of you in the E-mini or Forex. You know how the wild swings in volatility drive you nuts? When you come to anticipate the size of the pullback and look for equality, 61 or 161 based on market conditions, you tend to wait for the action to come to you and don't fall prey to these terrible swings nearly as much. It will take some practice to get the hang of it, but like anything else once you start developing a feel for it you'll be good to go.



# Forex

Everything goes in cycles. One of the greatest eras for the stock market was obviously the bull market from 1982 to 2000. I wouldn't say we will never see such an era of excitement for stocks ever again, but history has shown us the mania for stocks comes every 75 years or so. While we had a bull market for stocks that ended in 1966, it didn't even come close to the excitement of the 1920s. Let's just say there are many correlations between the mania for stocks in the late 1920s and the late 1990s. When the NASDAQ bubble burst, many participants were removed from the market that will never be there again.

Some of these players who escaped with their bankrolls migrated to the real estate market while others switched to precious metals. Others switched to the Forex market. While NASDAQ volume is nearly 2 billion shares a day, Forex trade averages \$1.5 to \$3.5 trillion per day. It is a huge market where players have easy access to any number of different currency pairs.

It is with this thought in mind that I add a chapter to this book on the Forex market. Mind you, if you need a primer on pips, spreads, or any of the other basics involved with the mechanics of the trades, this isn't the place. There are other excellent books on the subject. Some of them suggest that following fundamentals as well as the news events are important to your success. I won't dispute that here, but I won't cover that material either. I will tell you the same thing I said about the stocks. I believe everything you want to know about any financial instrument that has enough liquidity to be traded by the masses is right in front of you on the chart. What we will cover here is the same methods as the rest of the book. If you rely exclusively on fundamental analysis you are likely to get killed. It will give you some idea of the larger trend, but is useless for specific entries and exits. There are new players to the

Forex market all of the time. What these players need is a sound foundation as well as advanced education in order to understand how the markets work.

My disclaimer is that I don't claim to be an expert on the subject of Forex. However, I can tell you that I've gone through an extensive research period to show you the very same cycles that work on the other instruments also work on currencies, whether they are currency pairs or futures contracts. What this research shows is these cycles can be effective tools in navigating these fairly volatile markets. Those of you who trade Forex will continue to study news events and fundamentals. I have my own personal bias on that as a technician. What I'm doing with this chapter is showing you how you can improve your own precision. This book is not so much about telling you what to do but be a guide as to when to do it.

The major difference as far as this methodology goes is the Forex market is a 24-hour market and the bars that we count on stocks which are open from 9:30 A.M. until 4:00 P.M. Eastern Standard Time are just counted on a continuous basis. What this means is there are lulls in activity due to different markets in different parts of the world. The Forex trading day begins at 5:00 P.M. in the U.S. Eastern time zone on Sunday, which lines up four or five hours behind Greenwich Mean Time (GMT), a central point of reference for traders around the world. At 5:00 P.M. in the eastern United States, it is already morning in Australia. Volume may be good in Sydney at that time but it does not crank up until Tokyo, London, and New York wake up. So whichever market you are trading, be cognizant of the fact that better setups occur more frequently at certain times of the day.

For those of you who trade Forex exclusively, all you really have to do is follow everything you've learned in this book from page one. What this chapter will do is give you a few examples so you can know with confidence that the time factor works in your area as well. It's very important to see a methodology over and over before you begin to trust it. So I'll give you examples on a variety of charts so you can have the same confidence the stock and commodities players have. If you already have good technical indicators, great! Our first set of examples comes from a case study of the Euro/Yen pair. Figure 9.1 covers most of 2005.

## ■ More Divergences

We've imposed the MACD as well as the 20- and 50-day moving averages on this chart. This is a good uptrend, of which there are two key points I want to take from this chart. The first is the portion of the action from the



**FIGURE 9.1 Daily Euroyen Most of 2005**

June low to the August high and low. This progression makes a complete low to high-to-low cycle that completes in 42 days. The number 42 as we know by now is a derivative of the 4.23 extension, which also has various Fibonacci relationships. More important to your pattern-recognition skills is the time/price cluster at the low. The action spikes briefly intraday below the 61 percent retracement level, but for all practical purposes we have a 61 percent price/42-day time cluster. The low leaves a tail and two bars later the confirmation comes in the form of a good bullish candle. That is your best opportunity to buy the dip even though there is another tail left on the sixtieth day of the trend in September. Any time after the September low the MACD is already creating a bearish divergence where only the most aggressive players should be initiating new positions. Swing traders should be looking for a shorter-term play lasting anywhere from several days to a few weeks simply because in real time we don't have the benefit of hindsight.

The high in November comes on a cluster of time. It is the ninety-fifth bar of the trend, which is 35 days off that September congestion low and entering the fifty-fourth bar off the August low. There is a divergence and we do get an aggressive short trade, but it's not the final high. The final top comes in December on the one hundred twenty-second (Lucas 123-1) day of the trend where the divergence finally kicks in for good. Notice also the Fibonacci extension targets that high near 143.



**FIGURE 9.2** Hourly Euroyen

In Figure 9.2, on an hourly basis we see a huge divergence developing but the high comes in on the one hundred twenty-fourth hour of this sequence, just missing the Lucas 123 bar. The signal comes as the one hundred twenty-fourth bar is a high-wave candle with a very small candle body telling us that buyers are becoming indecisive. This example shows what we've discussed in the chapter on divergences. Price action continues to drift higher, but the reversal doesn't come until the cycle completes. In this example, you may have been picked off and stopped out for a small loss had you gone short with the bearish engulfing bar on December 13 on the one hundred thirteenth bar. However, the 113 bar as a derivative off the Fibonacci 13 is a much lower-probability turn. By the time you get past the Gann 108-bar cycle, I would wait for the 118 bar in the very least before I would consider a major change of direction. At that point I'd consider the smaller time frame (15 minute) or an exceptionally large bearish candle before pulling the trigger. Once you get to 118, this is a much higher-probability turn bar, as is 121 and then Lucas 123.

The ensuing correction is an ABC sharp that comes close to an interwave 1.618 price extension but stops going down near the 0.618 price retrace-ment on the one hundred fifty-fifth bar of the trend. The next sequence higher does run out of gas on the sixty-eighth bar.

These cycles work on the smaller intraday cycles as well. I left out the MACD just so you could concentrate on the bars here. In Figure 9.3 we begin with a 33-bar leg to the downside which is punctuated with a 21-bar



**FIGURE 9.3** Five-Minute Euroyen

high-to-high cycle just as we see on stock charts and other commodities. From there an uptrend commences which spikes on the twenty-ninth bar. We have a complex pullback, which actually puts in a small-degree triple bottom on three separate bars at 156.82. From the first low at 11:00 the next move up hits high points at the thirty-fourth and fifty-sixth bars. On this particular chart there is a good degree of volatility in each bar, so it is very important to be very precise on your entries and exits as well as stop placement.

Our final chart of this case study exhibits more of the basic principles from other chapters. Here we are using a 15-minute time frame. The first sequence on January 25 exhibits an uptrend of approximately 167 pips. As this book has progressed we've paid less attention to the absolute wave count, but you could make out a five-wave progression here even though there is overlap that implies corrective activity. The first progression makes a 20-bar low-to-low cycle with a bullish engulfing candle on bar 20.

Figure 9.4 tops on the fortieth bar, which spells another 20-bar rally and pulls back without the benefit of a MACD divergence. After another 20-bar pullback the final leg up does kick in on the 60- to 62-bar cycle off the low. In this case it isn't a very good signal because we are absent a good candle setup. Without the benefit of a good bullish candle there the move would go without my participation. At the high near 157.40 a decent divergence develops on the seventy-sixth bar of the progression. This is a very slowly developing downtrend which only the most aggressive of you may choose to



**FIGURE 9.4** Euroyen 62-Bar Pullback

play because the only candle you get that hints that a confirmation is coming is with the high-wave candle in bar 76 (next to the final large candle at bar 75). But we do get a classic ABC down which is a 62-bar pullback where A equals C. If I were going to play this correction I'd wait for the B-wave up to fail where you do get a good bearish reversal signal in bars 31 to 34 off the top.

## ■ Golden Spiral Turns

Our next case study concerns the Australian dollar. We begin with a daily chart (Figure 9.5) of the uptrend in 2006. Here there are more principles discussed throughout this book. We begin with a 32-day uptrend and a 34-day pullback, which finds a low just south of the 61 percent retracement level. After the 34-bar correction which is a very good price/time cluster we get confirmation of a change in direction with a huge bullish candle. Since are dealing with four decimal places on this chart we have an approximate 40-pip move as a result of that bar. Bars 48 to 50 gave us a good evening star reversal pattern which leads to a correction which bottoms on another time cluster of 23 bars and the approximate 61 percent price retracement.

As the MACD divergence develops, the overall pattern tops on the sixty-third bar of the trend. This just misses a perfect 199 (Lucas) bar cycle but highlights what we've discussed in the chapter on divergences. There are



**FIGURE 9.5** Aussie Dollar 63-Bar Top

instances where the high will be on a perfect time bar to end a trend, but other times all we will get is a smaller-degree bar that runs its course without the perfect larger-degree cluster.

Figure 9.6 in our case study shows a progression from 2004. There is an excellent five-wave progression where we have a steep retracement in wave (ii) that completes a 60-day low-to-low cycle. Wave (ii) is a three-wave corrective progression where the two legs are equal in size. The low came as a result of a harami where the candle body retraces more than 50 percent of the preceding bearish candle. I've stated elsewhere in this book that moving averages support the strongest of trends and this is a good textbook example.

Continuing in Figure 9.6, the 20-day moving average supports a very powerful wave (iii) as it is touched on the twenty-eighth day of the leg and day 29 is a powerful candle. The move finally tops in the fifty-sixth day of the progression and forms a triangle. You can make a case for a wave (iv) triangle here which I've outlined, but since it ends on 50 bars perhaps you can also make a case instead for an ending diagonal triangle which I haven't drawn so as not to confuse you. If you draw your own trend lines here you can make out the converging lines which top on a perfect 62 bars. The reason I drew the triangle is the price measurements do confirm it. I would prefer to see a triangle confirmed by both price and time calculations, but the market doesn't always give us the perfect setup. What it does give us are perfect time calculations as the whole move tops in a 188- to 62-bar cluster.



**FIGURE 9.6 Major MACD Divergence**

We also get a very nice reversal candle formation at the top where the bearish MACD divergence pays off.

Here is Figure 9.7 where the MACD divergence pays off. Before we get there follow the progression of this downtrend. As we come off the top, price action hits the 20-period moving average on the eleventh bar, which is a good pattern-recognition tendency. The 20 is not touched again although bar 21 is the highest point of the next small spike. We do get a near term low



**FIGURE 9.7 MACD on Downtrend**



**FIGURE 9.8 MACD 144-Bar Reversal**

on the forty-sixth bar of the cycle which you know by now is a very common relationship. The downtrend resumes at the 56-bar window (55+1). The bounce creates a congestion zone into January 9. This particular high stalls at the 38 percent price retracement of portion of the leg that started down on January 3. The final low traces out on the thirty-third bar of the progression off that congestion zone.

What you should take away from this chart is the fact that divergences will persist for a long time. This is such a powerful downtrend that we covered a lot of price territory in the first 46 bars where momentum peaked. However, it took nearly another 100 hours of price action before we got a good low. Keep in mind the time frame of this action. In the bigger scheme of things, it was an A-wave low and ultimately by the end of the month this low was taken out. However, it was not taken out before we had a good countertrend rally.

What happened in the C-wave down later in the month is shown in Figure 9.8. We are using the same time frame. What is notable on this chart is the spike into the 20-period moving average on the forty-seventh bar of the progression. Once again we have a strong initial thrust that takes the MACD all the way down. We don't get a low for another 100 to 120 hours. Where does the progression bottom? Fibonacci bar 144 finally takes care of a triple positive divergence.

The next chart, in Figure 9.9, changes gears a little bit but exhibits another concept we've covered in the advanced Fibonacci section.

Here is the correction from 2004. Check out the final leg up in February. I've drawn extension lines that cover only the final small portion of the uptrend. There are two major relationships in this downtrend you should pay close attention to. The first leg down, which ends near price point 73 is a 1.618 extension of the final leg up. It shows a 0.618 line there only because I didn't want to use too many retracement lines with the eSignal format. That particular point on the chart that you can target ahead of time hits a beautiful low on the 18 (Lucas) bar move of the trend. After another 18-bar cycle bounce, the downtrend resumes. I will repeat this tendency for the benefit of Forex traders who are skipping the rest of the book to read this chapter first. Gann as well as traders who follow financial geometry believe multiples of 144 (Fibonacci) are very important. They are. That is why we pay special attention to 36, 72, and 108 cycles. Of course, Lucas 18 is also a multiple of the same. In this case we have two 18-bar cycles or a 36-bar high-to-high progression.

As the trend continued, we can see a small spike up into the fifty-sixth bar at the 20-period moving average and finally bottom on the eighty-seventh bar. That low is an excellent 2.618 price extension of that final leg up, even as the eSignal format calls it 1.618. I will caution you it doesn't always work out this way but it does more often than not. In the very least, had you targeted this low using this methodology you would have been in an excellent position to go long in the middle of June when we had an excellent reversal candle.



**FIGURE 9.9** 261 Extension



**FIGURE 9.10 55-Bars Up**

The next two charts of our Australian dollar case study are for those of you who concentrate on intraday patterns. The first one is very straightforward. On a 15-minute basis, in Figure 9.10, we have a 55-bar progression. The first leg up creates a congestion zone around bar 21 as three bars share a common high. The low comes in at bar 23. There is another huge spike down at bar 29 and we top at bar 31. The Fibonacci retracements are drawn off the low and secondary low to the high at bar 31 to target a pullback off the 31-bar high. You can clearly see we found a bottom at a double 38 percent retracement line after a 13-bar pullback (44-31). The final bar tops in the eleventh bar of the leg for an overall high at the 55-bar cycle.

The next chart is here because I wanted to highlight a basic Elliott relationship we haven't covered in this chapter for Figure 9.11. We do have a five-wave progression where the top of wave (iii) is a 1.618 price extension of wave (i) as it is measured off the low of wave (ii). This is how traditional Elliotticians measure waves based on common Fibonacci calculations. Wave (iii) actually tops on the sixty-ninth bar of the move which is the one hundred twenty-fifth bar overall. Check out the low on bar 56 as it leaves a huge tail to the downside. While this is a very big bar it only is really a half a bar! If you consider that, by the time it tops, it is really the sixty-eighth bar of the move even though it is actually the one hundred twenty-fifth bar of the entire trend. That bar is also a high-wave candle. Without confusing you in my opinion the chart may be under the



**FIGURE 9.11 Elliott Progression**

influence of both the one hundred twenty-third (Lucas) and 127 (1.27 derivative) bar cycles.

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FOREX

While it is not shown, the ensuing correction that ends on the one hundred fifty-sixth bar is a cluster with the 38 percent price retracement off the low. The final high comes in at the 188-189 bar cycle, which is a double high and 33 bars off the wave (iv) low. The MACD also levels off at that point.

## ■ Fibonacci/Golden Spiral Windows Work

The final two charts of this chapter exhibit excellent timing calculations on a Yen five-minute chart. In Figure 9.12, if you are going to trade on five-minute bars, this might be the one that has the cleanest tendencies. I've outlined all of the relationships on this chart. In this downtrend we break lower after the eighteenth bar. The bounce concludes after 21-bars up. The next phase lower gives you numerous chances to get in. There are opportunities to go short on the eleventh, twenty-ninth, and forty-sixth bars. We get a very clean low on the one hundred sixty-second bar of the move. For the most part, where the trend is not contained by the 20-period moving average, it is contained by the 50.

Finally, here's what happened on the next progression up off the 162-bar low in Figure 9.13. I've added this leg so you can see just how powerful a



**FIGURE 9.12** Yen 162-Bar Low

162-bar tendency can be. The whole cycle starts anew with a 68-bar move the other way. Note how the 55-bar cycle becomes a buying opportunity at the 61 percent price retracement level.

Here are a few things to note about this chapter. I've given you examples from some of the most liquid markets, which are the most popular. There are other less-liquid markets you should avoid. Those setups will be few and far between. Here I've picked some of the better examples. However, it's like the other markets. Really good setups don't materialize all of the time. As this is 24-hour trading, many of the setups are nothing but junk. You should stay away from them. The analogy to the stock market is there is a universe of 8000 to 10,000 stocks. Do you think all of them or even a large percentage of them are giving you great setups at any given point in time?

Of course they are not. Neither is the Forex market. If you are a five-minute trader you may have to wait hours or even a few days to get the kinds of progressions I've shown you here. Obviously, 15- or 60-minute charts are a little easier to find. I don't want to give you the impression that every single leg you are going to see has such precision. Due to the 24-hour nature of these markets, there will be long stretches of certain days where things don't line up; timing clusters won't match with Fibonacci price retracements. Probably the biggest difference I've seen in these charts is on the MACD. You may get more timing clusters that have MACD divergences



**FIGURE 9.13** Yen Part II

than any other chart I've covered in this book. That goes for stocks, indices, futures, and commodities.

However, as you can see, there are some incredible setups and the timing methodology discussed in this book does work beautifully in this market as well. The truth comes when you examine hourly and daily charts. It's the smaller time frames where you need to exercise caution.

Another thing, some of these charts have incredibly wild swings. Since the leverage is 1000 to 1, it wouldn't take much to make a significant dent in your bankroll if you happen to get stopped out at the wrong time. What I am implying here is this is not the tooth fairy. Just because you keep track of the bars, it doesn't mean every trade is going to work out. If you happen to catch a time sequence that comes off the heels of an exceptionally large tail or wide range bar, either pass on the trade or adjust your stop accordingly. As long as you have capital, there's always a next trade. There is no need to get greedy.

So while there are some enhancements and tweaks compared to stocks, this is a methodology that should enhance your pattern-recognition capabilities. It is a methodology you need to combat the wild swings that go with trading these Forex charts. You need to give yourself the skills that will put you over the top with confidence to tackle this challenging market.

# Squaring of Price and Time

As you know, the original inspiration for the first edition came about in 2005 and 2006 when I saw many traders attempting to short markets based on early MACD signals. In the very least, I wanted to introduce market timing to people who used other methodologies or had no idea markets could be timed. After all, the mantra in the industry was that markets were random and one had to be invested all the time if they were to catch the biggest 6 to 10 days out of the year. My thought process at the time was if people were going to use lagging indicators, at least they ought to be able to make sense of it by applying time windows to the process.

A lot has happened in our work since that time. We've gone to a pure pattern-recognition-based methodology for both our newsletters and trading strategies. I've done a lot of research into Gann methodology and found that when it comes to timing markets, a key ingredient to the recipe is one of Gann's greatest discoveries. I'm not saying this; Gann is quoted as such in his famous course on markets. Gann said his most important discovery when it comes to financial markets is the squaring of range and time.

In fact, we found that as important as the time windows are, they don't always fire off. This was very perplexing at first but I dug deep and wanted to find the reason why markets didn't always kick in on our Fibonacci- or golden spiral-based windows. We also found that some did fire off at 61 or 161 or 89 and didn't last too long. What we found is the best pivots do have some sort of balancing of price and time. Gann basically said that when price and time square, the trend changes direction.

This concept is vitally important to the trader who wants to learn the purest form of pattern recognition as well as take their understanding to a new level. In our development as traders and market timers we wanted to wean ourselves off lagging indicators. You are not going to be able to accomplish that simply by reading a chapter in a book. But our hope is by adding this chapter you'll be inspired enough to consider digging into this discovery much deeper and over a period of time, be able to go beyond relying on indicators such as MACD, stochastics, or RSI. For the trader trained on a lagging indicator who embraced Fibonacci/Elliott, the next frontier is Gann. Gann can be very complicated and for many it takes years to master. In this chapter we'll give you one key breakthrough strategy that will enable you to take your market understanding and hopefully your trading skills to the next level.

## ■ Price and Time Symmetry

I'll show you various types of range and time squaring. It works in all degrees of trend and you are limited only by your creativity and imagination. The first time I was exposed to range and time was quite by accident. The stock POT, in Figure 10.1, had peaked at the 121 handle in 121 trading days. I stumbled into it. You won't find this chart anymore simply because the stock split three to one, but the important takeaway was after price and time did balance the stock sold off from 121 down to about 80 in roughly



FIGURE 10.1 POT 121 Symmetry

30 trading days. That's a huge move. What I also found was this type of setup didn't materialize everyday but when it did the moves were much better than average. Once they go, they really go.

That being said, all a trader really needs to do is find a handful of these setups every month and they'd be doing just fine. I'm not saying these are the only type setups you should trade, but they are a powerful component in anyone's trading arsenal. But you have to know what to look for and you must have patience to find them. You also need to adopt the approach of being a detective. I'm not saying one has to look at hundreds of stocks either. Pick 20 to 30 heavily traded stocks and follow them on a regular basis. You'll likely find a couple of these setups every month. But finding stocks with this kind of symmetry isn't even the most important thing you can do with this method.

As you can see, studying market timing isn't the easiest vocation in the world. It can be time consuming and a lot of work. I think it's important to work hard but also work smart. What we want to do is leverage our work to make the rest of our trading life easier. The way we do that is to find an important time and price symmetry on an important sector. Such a sector calculation appeared in April 2010 in the all-important BKX. In Figure 10.2, the bear market and subsequent financial disaster materialized because of the problems in banking and housing. Both of these sectors can lead markets up and down. In fact, if the market starts a pullback and the banks are not leading, chances are that correction will be short-lived. We've also seen the



**FIGURE 10.2** BKX 58 Symmetry

market do quite nicely post 2008 as long as housing and banking stayed neutral. In other words, banks don't need to lead to the upside in order for the market to rally. So when the BKX gave us this perfect Gann symmetry in April 2010 it was time to take notice.

From the bottom in 2009, markets staged a nice rally into the spring of 2010. Once they peaked people were guessing as to whether a high was at hand. Unless you have a good calculation you'll be guessing as well. In our case, we discovered the BKX was up 58.7 weeks and turned at the price point of 58.81.

This is called leveraging key information. All we really need is one reading in an important sector to tell us very early on how important the turn can be. One of the key characteristics of important market turns is the appearance of what Gann called the squaring of range and time. This particular pivot was so important and powerful that when markets made new highs the next year in 2011, the BKX did not confirm as it did not go to new highs. Most important to any trader is an understanding of the macro picture. One of the biggest reasons people lose money is they fail to recognize an important market turn. People tend to realize it too late and by the time they do, they end up giving back much or all of the profits from the preceding trend. Once you figure out the macro, you are free to take advantage of numerous micro trading opportunities. In this case you could've shorted a banking stock or had confidence in knowing that since a key market leader had turned, whatever you might have been looking at had a better chance of working on the short side as well.

This works on the major averages as well. Since the 2009 bottom we've had several instances where a range and time example turned the market. The first one to look at was the Dow in the autumn of 2010. It was the back-side of this BKX peak.

This particular low in the Dow, in Figure 10.3, required some creativity because the turn didn't come on the absolute low of the pattern. The 2007 to 2009 move in the Dow was from 14198 to 6469.95 or rounding to 6479 which was a range of 7728 points. The correction that started in April 2010 got nasty in certain areas of the market. So much the Fed got concerned enough to institute QE2. The Fed came out with QE2 around the beginning of September 2010 and the market took off. But like the banks several months earlier there was considerable doubt whether the rally would last.

In our work, we noticed the market turned up 77 weeks off the bottom after a bear market that had a range of 7728 points. No other indicators were needed. Once the markets turned on the symmetry it was good



**FIGURE 10.3 Dow 77 Symmetry**

enough for us to recognize something important was materializing. Notice the variation. In the prior examples price matched time. One hundred and twenty-one lined up in terms of price and time as did 58. In this case we had a range of 7728 on the prior major trend and prices didn't square until the new trend matched 77. Another thing to note is we have a market move of roughly 7700 points and a time window at 77. What that means is you should feel free to be creative enough to manipulate the decimal point and match it to the particular chart you are working on. With markets that are up to five figures to the left or four figures to the right of the decimal point (in the Forex market) one must be creative or it won't work for you. If you think this is a fluke, the markets had an even nastier pullback one year later.

This correction in the NDX, in Figure 10.4, required just as much detective work as that Dow turn did. From the October 31, 2007 peak to the October 4, 2011 low week, 204 weeks elapsed. The retest of the bottom in the NDX was 2042. While the actual bottom was August at 2035, the NASDAQ ended up making its actual bottom right there on October 4. So we had a bottom in the NASDAQ, which borrowed the symmetry from the NDX that missed a new print low by seven points at the same time before turning up for good.

Hey, nobody said this was going to be easy! After the Dow bottomed several people disputed this turn, their opinion was the market turned because of



**FIGURE 10.4 NDX 204 Symmetry**

Bernanke's QE2. That's missing the point. What is the most important trait a trader possesses about a particular move in the market? Wouldn't you agree that it is conviction about the move? When the going gets a little rough, the difference between breaking even and getting a small profit is usually the trader's conviction about the move. What is the difference between the trader getting a small profit or having the wisdom to hang on to let a winner run? Chances are it's also conviction about the move. It's really hard to develop conviction about a move when your conviction is based on a news event. However that changes when your understanding shifts from the news to the comfort of knowing the move originated with the symmetry of Gann's most important discovery. When you have the knowledge of a great symmetry to start a leg clustered with the realization these moves tend to go further than most people anticipate, having that conviction could be the most important edge you possess.

Sometimes you have to really dig deep to get the correct symmetry. Such was the case in the 2011 peak in the Dow. In Figure 10.5, the high at the time was 12876. It didn't seem that anything was lining up but when we take the square root of 12876 we get 113.47. The actual move from March 6, 2009 to May 2, 2011 is 112.4 weeks. This is in our margin of error of plus or minus one, so we can say the square root of 113 does match the time of 113 weeks. This turn started the major move down of 2011 that didn't stop until the October turn which was also dominated by that NDX symmetry we just discussed. The bottom of that move was 10404. The date was October 4 or 10/4. So we had a low of 10404 on 10/4.



**FIGURE 10.5 Dow Symmetry**

If you think that's a fluke, just two months later the BTK traced out a similar type of range and time calculation. Here is Figure 10.6.

This is the exact same bear phase correction but we are looking at the Biotech Index. This particular high came in at a peak of 1514 and bottomed on a low of 1001 for a range of 513 points. The high of this move for the year was back on May 13 or 5/13. In the case of the Dow, the price matched the date after we manipulated the decimal point. For the BTK the range



**FIGURE 10.6 BTK 513 Symmetry**

matched the original high date of 5/13. You truly are limited only by your creativity and imagination. It just depends on how much due diligence you are willing to do and how deep you are willing to dig. In trading we lose out by doing too much analysis. It's called paralysis by analysis. However, when you study highs and lows in markets you don't study every day because markets don't peak or bottom every day. However if you will be willing to do the extra work when the market turns it could be well worth your time invested because once you find something, you can leverage that key calculation into developing the kind of conviction of catching important moves early in the trade. Not so early that you risk retracing the bottom, but early enough before lots of other people figure it out. What I've found is you may not find the calculations the very day a sector bottoms but if you perform a few tests over a couple of days just by investing about 30 minutes to an hour you'll be surprised by what you uncover. What kinds of tests do you use? You look at highs, lows, ranges, square roots, and the same for the prior sequence. In the case of the Dow the 77 weeks didn't make sense until you were willing to dig deep enough to realize the bear range was 7728 and that matched up with the 77 weeks.

## ■ Cocoa Study

This works for all kinds of charts. Let's take a look at a very complex commodity such as cocoa and these facts are taken from the Chuck Kowalski Commodity Guide:

### Cocoa—Facts on Cocoa Crops:

The cocoa tree needs a hot and rainy climate (tropical rain forest) in order to thrive and is generally confined to areas not more than 20 degrees north or south of the equator. The cocoa tree takes about five years after planting to produce cocoa beans and about 10 years to achieve maximum production. Cocoa trees produce pods. Each pod produces from 20 to 50 beans (approximately 400 beans are required to make one pound of chocolate). Most cocoa is harvested between October and January.

### Cocoa Fundamentals—Supply:

The largest cocoa producing countries are Côte d'Ivoire (40 percent plus), Ghana (15 percent), Indonesia (14 percent), Nigeria (5 percent), and Brazil (4 percent). Cocoa crops are susceptible to two main diseases—black pod disease for African crops and a fungus called witch's broom that damaged Brazil's cocoa crop in the 1990s.

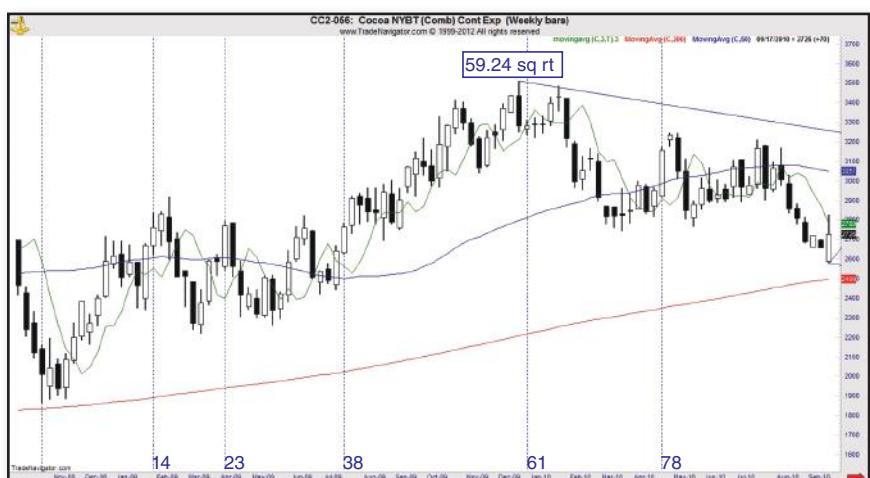
Côte d'Ivoire and Ghana produce about 55 percent of the world's cocoa. You will learn how unstable these countries are while trading cocoa futures. Political, social, and labor issues regularly threaten to decrease or disrupt the supply of cocoa. The annual world production of cocoa is about 3 million metric tons.

#### Cocoa Fundamentals—Demand:

The Netherlands and the United States each process about 15 percent of the world's annual cocoa production. The Quarterly Cocoa Grind numbers measure the amount of cocoa demand. A higher grind number means demand is increasing. Cocoa is mainly consumed in Europe, North America, Japan, and Singapore. The United States consumes about 13 percent of the world's cocoa, Germany 9.1 percent, France 7.2 percent, and the UK 6.8 percent. The United States imports cocoa from Latin America, Europe imports from Africa, and Asia imports from Indonesia.

The bottom line here is that if you are trading the fundamentals not only do you have to become a meteorologist but since cocoa grows in some of the most politically unstable areas of the world you would have to become a political insider. Even if one was an expert on the weather it would be impossible to be a political insider as well. The solution is understanding the pattern.

Here's one phase where the chart found, in Figure 10.7, shows a low at 1867 on the longer-term 056 chart while finding a high at 3510. Like the earlier Dow chart the symmetry is not obvious until you realize the square



**FIGURE 10.7** Cocoa 59 Symmetry



**FIGURE 10.8** Corn 302 Symmetry

root of 3510 is 59.24 while the move itself materializes in 59.7 weeks. If we compare this chart to the rest of the pivots in this book we see little difference, as a 60-week high is a 60-week high. However, we get the added conviction of this move because we also realize that price and time are squaring out at this pivot and the pattern gives us a 38-week correction. If this method will work in a complicated area of the commodities market, chances are it will work for most instruments you can think of.

One of the best price and time symmetries our *Futures* newsletter ever caught was the low on the daily volume rollover chart in September 2009. This corn chart, in Figure 10.8, was in a brutal bear market with no hope for turning back up. It found a low at 302 in 302 trading days. But from early September it staged an incredible rally which peaked on the longer-term 056 chart in January at a 43 percent gain. In fact this low was the secondary bottom after the commodity crash from 2008. You can also see that 302 is not a Fibonacci or Lucas number. It's just Gann squaring price and time. You can't find this exact chart anymore because of the nature of volume rollover charts in futures markets. But it turned perfectly when this particular continuation chart was active.

Some of these examples are a bit old, so here's a futures example still active at the time I was writing it.

This is orange juice, and, in Figure 10.9, OJ I have no idea what the fundamentals of this chart are, it makes no difference. The high is 204.15 in January 2012 and low at 81.75 on May 18. The trend was 82 days with a low at 81.75. You don't need to know the particulars of this chart if you can ascertain the symmetry provided by this bottom. What you do need to



**FIGURE 10.9** OJ 82 Symmetry

know is that on every pullback you have to think twice about going short because you would be going up against this outstanding reading. When this picture was taken, two pullbacks had failed. Finally in December, in Figure 10.10 and Figure 10.11, it had reached a point where it had a cluster of time windows where it was 144 days off the bottom but also near 233 days off the peak. If this chart were to peak in this window, it finally had the best set of conditions to peak since the low. Since the bottom was



**FIGURE 10.10** 144-233 Window



**FIGURE 10.11 Follow Through**

stronger than the high there's a reasonably good chance this chart could set up an intermediate-term trading range. I went back a couple of weeks later so you can see how it responded to this time window.

Inflection points like these are instructive because they give us good alternatives. Either we end up with a trading range because the low is really good and not likely to be taken and the 144/233 window represents serious resistance. It would take a strong underlying leg to take it out, which we have, but the pivot itself is also proving to be strong. That's not contradictory information, rather it is a way to manage risk and uncertainty. We don't know what is going to happen. All we do know is symmetry like what we have at this bottom is excellent but trends don't have to last forever. At the time of this writing, it was already at 144 days, which is excellent.

We want to always look at a set of conditions and figure out what the pattern is likely to do. In this case a pullback based on a 144/233 window can create damage but a very strong underlying leg will continue to push higher and it won't go just a little higher, it will end up going a lot higher. Our final example of the futures charts is on a longer-term weekly chart for copper in Figure 10.12. This study uses the longer-term volume roll-over 056 chart. It shows a low of 124.75 and peak of 462.55 for a range of 337.80. We manipulate the decimal point of 337 (or rounded to 338) and come up with 34 when it comes to symmetry on a weekly chart. As you can see, this bear trend bottoms in 33 weeks. This low was still holding over a year later even though it didn't end up making a new high.



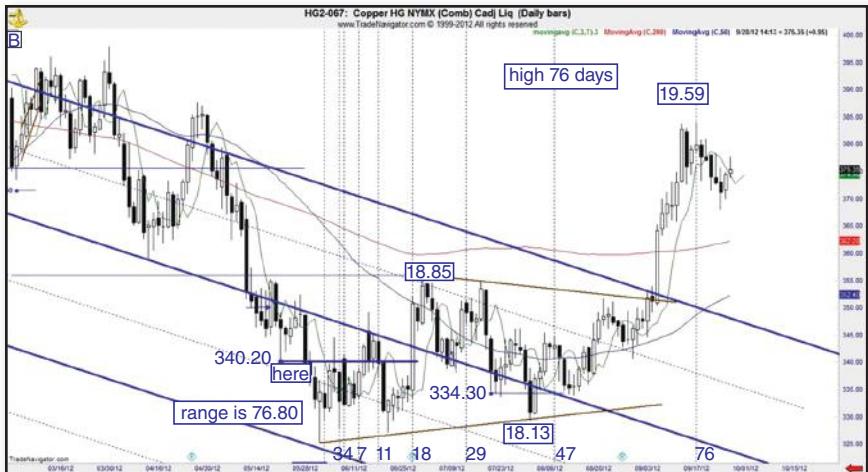
**FIGURE 10.12 Copper 33 Symmetry**

## ■ Copper Study

If that was the only calculation it would be good enough. However with a high at 462.55 and low at 300.10 there is a range of 162.45. As you can see, this chart bottoms in the one hundred sixty-third day in Figure 10.13. In this case, we have a double symmetry that is rare and probably why the low was still good in December 2012. What you should realize is you may get difference prices on the 067 daily, 056 weekly, and even the front month contract.



**FIGURE 10.13 Copper 162 Symmetry**



**FIGURE 10.14 Copper 76 Symmetry**

Futures trading is very complicated and the calculations are subject to the numbers on any of these charts. However, the longer-term 056 readings are most reliable.

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Later on in this progression, in Figure 10.14, the move down from February to June of 2012 had a range of 76.80, which at the time didn't mean too much although the next rally peaked in 76 days! This was the actual continuation chart at the time taken from our weekly *Futures* update. In this case you had to be enough of a detective to do your due diligence on the range of the prior bear drop. Just so you know, the numbers above and below the pivots are the square roots.

What does every example have in common? We are learning how to recognize a turn without the need for any lagging indicators. This is also a very advanced form of market timing, which will give you an edge over most participants in the market.

## ■ Stocks

Now let's look and see how this would apply to individual stocks. In late 2012 Google, in Figure 10.15, had a very interesting peak. Earlier in the year it had a pullback from a high of 670.25 to a low of 556.52 for a range of 113.73 points. The low was on June 14 and the peak was on October 5 for a span of 113 calendar days!



**FIGURE 10.15** Google 113 Symmetry

Beyond the obvious for anyone trading Google, why is this calculation important? Google is an important market leader and when tech loses a leader like this it's hard for it to stay up. In fact, Friday, October 5, was the day the Dow put in an important high just days prior to our October 11 five-year anniversary to the 2007 top and just short of the October 9 and 10, 2002, 10-year anniversary of the end of the Internet bear market. When you find a calculation on an important stock like Google you don't even need to find another calculation on other tech stocks for as long as the trend lasts, because the leverage factor allows you to short other tech stocks that follow Google closely and you'll end up with the same result.

Another stock that wasn't quite the leader, Google was ran a good sequence in 2010. On November 2, 2010, CELG, in Figure 10.16, put in a high and, like much of the material presented in this book, peaked out at a 61-day high-to-high cycle with the only difference being this one was based on calendar days. You may or may not have had the conviction to short this one based on that information, but when you realized it also had a 60.90 price handle at that 61-day high it became a very interesting opportunity. As you can see it led to an incredible selling wave, one of the best of the year. It didn't stop going down until it hit 64 trading days. Why would we consider the 64 cycle? The high at the origin of the pattern was 63.46. You can also see that the rally produced by the 64-day low ended up manifesting an even better rally than the correction phase! Perhaps now you can begin to appreciate how it could be worth your time invested instead of going after mediocre setups, how you



**FIGURE 10.16** Celgene 64 Symmetry

stay with these price and time winners because they end up going further than even the most optimistic person can anticipate!

Or how about this sequence in RIMM, which also has a 64 symmetry in Figure 10.17?

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SQUARING OF PRICE AND TIME

Our newsletter identified these great trading turns. From the low at the left the first pullback materialized at price handle 55.49 in 55 days, which was followed up by a high at 63.94 in 64 trading days. That was followed up by another low where the range was 6.46 after the high near 64.



**FIGURE 10.17** RIMM 64 Symmetry



**FIGURE 10.18** ANF 72 Symmetry

Here's one from the financial crisis. This is a chart, in Figure 10.18, of ANF (Abercrombie & Fitch) where we had a high of 85.77 and low of 13.66 for a range of 72.11. Look 72 weeks off the bottom for an important trading high.

This stock in, Figure 10.19, dropped 41 percent over the next 12 weeks. One thing we haven't covered is that these symmetries on stocks don't necessarily have to create lasting turns. Their value is as trading turns. If and



**FIGURE 10.19** ANF Part II

when the time comes that they are challenged and violated, it will usually take a strong underlying leg to violate and it will travel a good distance to a new high as you do see on this ANF chart.

What about applying square roots to price and time when it comes to stocks? We won't see this example every day, but here's one of the best you'll see in AA in Figure 10.20.

In this sequence we get a high of 17.60 at 311 calendar days off the 2009 bottom. It's innocent enough and without digging deeper won't mean anything. However when you take the square root of 311 you'll find it is 17.63 and now we see how range squares time perfectly. These are not easy to find and I'm not representing that these kinds of setups are growing on trees. What I am encouraging you to do is to develop a curiosity and willingness to dig a little deeper because you will be amazed what you'll find if you take the time to look.

Study these charts carefully because it exposes the different variations that are modern-day Gann. Realize that when Gann uncovered this method he was only working with daily, weekly, and monthly charts. He didn't have to deal with computers, intraday charts, or markets connected around the world in cyber speed. As you can see, some of these symmetries end up being simple but they are not easy to spot.

Now let's look at some of the more important turns in the new century. The 14198 high in the Dow was a 262-week high from the 2002 bottom, but that was also a square root of 119.15. If we take the low back in 1997 which



**FIGURE 10.20 AA 17 Symmetry**

was one of the bigger corrections of the late 1990s, we find that from that low to the 2007 peak is 119.4 months.

Now let's take the 1576 top in the SPX. Let's go back 1,576 days and we don't end up with anything significant. Now let's take the square root of 1576 and we get 39.69. Feel free to manipulate the decimal point and you'll find that when we go back 396 weeks it takes us to March 9, 2000 which is one day before the NASDAQ bubble popped on March 10, 2000! So if we are looking for symmetry significance in our 262-week top in 2007 we can see it's not just your run-of-the-mill, garden-variety 262-week time window. The two important peaks of our generation are tied together by a square root relationship.

While we are talking about the Internet bubble peak, the Great Depression low in the Dow was 40.56, which rounds to 40.6. Now take  $40.6 \times 10$  and obviously you get 406, but multiply by 20 and you get 812 and from the bottom of the Great Depression to the Internet bubble peak its 812 months, which is another advanced Gann calculation. When we take the square root of the bottom for the Dow in 2009 at 6470 we get 80.43. When we go back 802 months (which is plus or minus two), we get the April 28, 1942 bottom. Perhaps most important here is the 666.79 low in the SPX we get a square root of 25.82. When we go back 258 months we get the beginning of September 1987, which is within days of the 1987 peak.

Why is that important? The low at 666.79 is tied to the cycle peak in 1987 which suggests the 2009 bottom is a long-term generational low. It's at least a 21-year cycle low. This became important on the way up as market participants viewed Europe and every problem that materialized since the bottom as potentially the next Lehman moment. It has not been recognized for the generational low it could be. Given there is such good symmetry to the 87 peak, I can't say it couldn't be taken out, but it likely takes the mother of all bear markets in order to violate the 2009 bottom. What we do know is through 2012 the bottom hasn't been challenged seriously and few people in 2009 or 2010 thought that would ever happen.

What else does this methodology do for us? To this point we've discussed Fibonacci, Lucas, and golden spiral relationships. As you can see, Gann's discovery opens up a world of possibilities. Virtually any number is fair game, because all we need is any number and project it to the future or back to the past in order to find the proper symmetry. Once we find that symmetry we can have serious conviction about a move. Whether that move is a 64-day window on a chart like Celgene or a 258-month

symmetry like we had in the SPX, the implications are the same. Depending on the degree of the move, once you have uncovered the symmetry chances are the move is going to be significant relative to the time frame you are working with. Once you uncover a particular symmetry you no longer need to be so concerned about timing windows until the trend changes again. You can start to concentrate on other pattern-recognition methods such as Fibonacci legs, Elliott, or pure support and resistance. Once you understand the macro picture of the market that is the main trend, you've won most of the battle.

# Andrews Pitchforks Crash Course

This really is not a book about pitchforks, but in the next chapter I have several examples using the pitchforks that have become an important tool in our newsletters over the years. Without you having to get another book just to understand the pitchforks I'm going to give you a crash course and bring you up to speed.

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It took me years to get interested in the pitchforks, yet they are included on just about any software package you can think of. Most traders are also aware of the pitchforks, which are also known as median channels, but when asked why it isn't a regular part of their game plan, the answer I hear most is, "I don't know." I think the real reason is it is a mysterious discipline that requires careful study and there are only a handful of great instructors in the world. The other reason is people really don't understand how to draw a pitchfork properly.

We believe the best use of a pitchfork is as a GPS navigation system to understand the pattern. For example, look at the following YM chart in Figure 11.1.

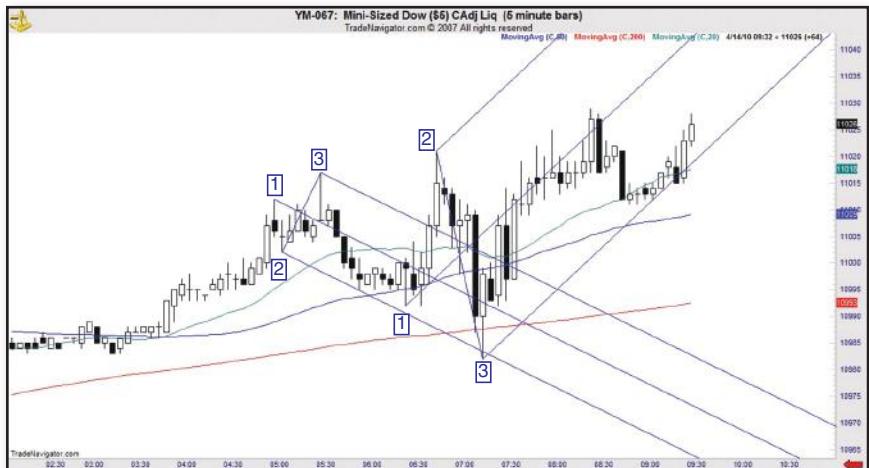
How difficult is it to navigate the pattern on this five-minute YM chart? It certainly isn't easy. But look at the next chart and cloudy becomes clear and uncertainty becomes certain. Do you think this method can help you understand the pattern better?



**FIGURE 11.1 YM Five Minute**

We believe the median channels are an indispensable tool in our arsenal to recognize patterns in this challenging market environment. There are two key takeaways in order to start drawing them properly on your own. First of all, one must grasp how to draw the anchor. Then one must realize we are looking for validations of the lines. The reason we are looking for validations is we use this method more as a forecasting tool as opposed to a trading tool, although it can be used for that as well.

What we want is a methodology that helps us project what the future can be, based upon our trust of the prior validations. That being said, look at the same YM chart with the pitchfork in Figure 11.2. The anchor to the left has



**FIGURE 11.2 YM with Pitchfork**



**FIGURE 11.3 INTC Weak Channel**

three numbers (1, 2, 3). What we are looking for is the high before the high, low before the high, and the high. For bottoms we are looking for the low before the low, high before the low, and the low. In many cases these lines will give us a good basis for the next developing pattern. Then we look for validations.

This chart of INTC, in Figure 11.3, gives you a perfect example of how to draw the anchor. Most notable is the action validates the mid line of the pitchfork and pulls back to test the lower rising line. There are two channels, the weak side channel highlighted in this chart and the strong side, which is the upper channel. These channels are important because they are a visual means of establishing the strength of the trend. There is another tool called the ADX which helps us gauge the strength of a trend, but it doesn't work well on intraday charts. You'll find the median channels work in time frames down to a 15-minute chart. This pattern spends the majority of its life in the lower weak side channel, which means the bounce has a weak underlying structure. Because it validates the mid line, we can trust it when it breaks below the channel. In fact, when it breaks below the rising channel line it becomes a high-probability event there will be a test of the low. In the bigger scheme of things, this pattern was nothing more than a bear rally in a larger downtrend. Now you can see why it makes perfect sense the pattern spent its time in the lower weak side channel.

Here are a couple of simple examples. This chart of Goldman Sachs, in Figure 11.4, takes the bigger low before the low because it helps us to validate



**FIGURE 11.4** Goldman Sachs

the high in the strong side channel. You could have drawn the anchor from either of the lows before the low, but what you want is a channel that gives you the best validations. Some people will say that is form fitting the data. Perhaps it is, but the idea is to get a channel that we can trust for the future.

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ANDREWS PITCHFORKS CRASH COURSE



**FIGURE 11.5** PFE Anchor



**FIGURE 11.6 SPY Off 2009 Bottom**

shows us how to draw a basic anchor and we get several validations. The most important validation is the pullback to the rising line. That becomes a buyable opportunity.

This median channel gives a good representation of the SPY off the 2009 bottom in Figure 11.6. It's a fairly good move because the early stage stays in the strong side channel and by the time it gets to the April 2010 pullback, it comes down to the rising channel itself and threatens to break away to the downside but never does. After the recovery, the pattern never goes back into the strong side channel again, showing an underlying weakness that finally manifests in the correction of 2011. So let's introduce the concept of parallel warning lines.

The next chart, in Figure 11.7, is a continuation of the same action which shows you the entire correction of 2011. The parallel warning lines are basically the extension of the exact same channel, but either one frequency above or below the main lines. In this case, the price action validates the lower frequency very closely. It holds and finally the next rally into 2012 materializes. But do you see a problem? The pattern never regains its internal strength again by revisiting or establishing itself in the main channel again. This is likely to be a future problem for the markets.

Let's look at the next set of parallel lines in Figure 11.8. The original lines are in bold and you can see the original anchor that was drawn. This was the bear market from 2000 to 2002, and the final bottom came very close to the



**FIGURE 11.7 SPY Parallel Warning Lines**

bottom warning line one frequency lower. Can you begin to appreciate how well this method works for navigating longer-term trends?

Now let's look at a similar type pattern on the QQQ in Figure 11.9. It's very similar because the first one is the Internet bear, while the next chart is the financial crisis bear market. We get the same type of navigation with the parallel warning lines that drop one full frequency. But as we apply the symmetry to our work, we find that top in Q's is 55.07 and the bear for this move is roughly 55 weeks. It's a perfect price and time square that lines up with the pitchforks.



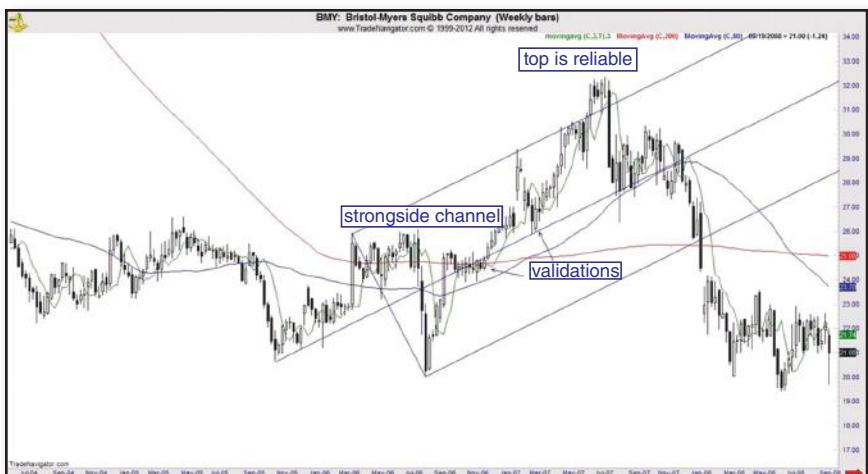
**FIGURE 11.8 Bear Bottom**



**FIGURE 11.9 Tech Bottom**

It doesn't always work out this way, as many times we'll either have price and time square or the channels. Many times we'll get a good square of 9 cluster with the pitchforks as you'll see in the next chapter. But the confluence of price and time square with Andrews shows us just how powerful the bottom in 2009 really is. It's important to think about those things later on in the progression of the trend when you get many people calling for the next Lehman moment.

The next two charts are just examples of how the basic channels work. The BMY channel, in Figure 11.10, spends the majority of the time in the strong



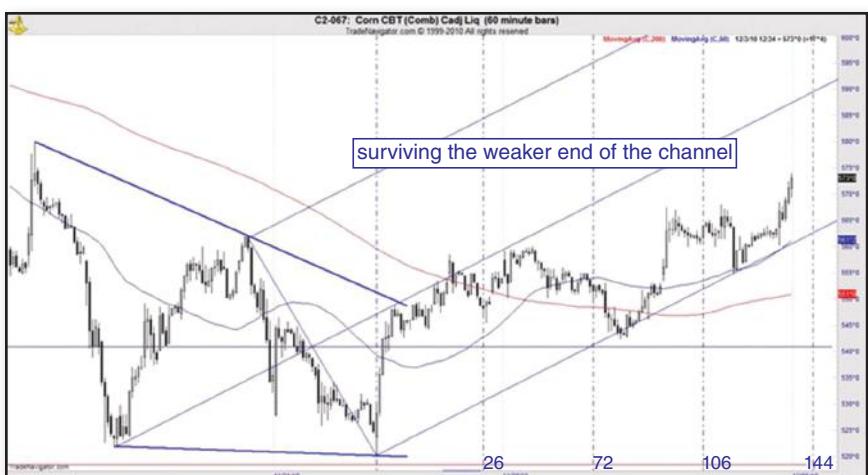
**FIGURE 11.10 BMY Ordinary Channel**



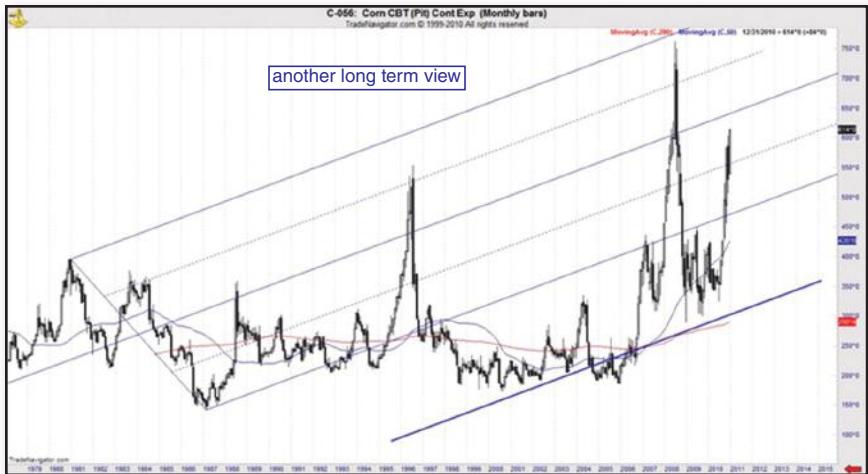
**FIGURE 11.11 LEN Ordinary Channel**

side channel and in the early stages, when the mid line validates, it's a sign the pattern could make a run at the top of the channel. There are several validations and when we do get three validations, when the top finally comes we can be more trusting of it. I could put calculations here, but I just want you to get the basic idea of what to look for when it comes to this method so you'll be better equipped to deal with it on your own charts. Then the LEN chart in Figure 11.11 goes south and also gives three validations that can be trusted.

The next chart is an hourly corn chart, in Figure 11.12, during a sequence several years ago. The takeaway here is the action takes place in the lower



**FIGURE 11.12 Corn Weak Channel**



**FIGURE 11.13 Long-Term Corn**

weak side channel, which shows a trend without really good underlying strength. But there are several really good validations. So let's look at some long-term charts so you can get an idea of how well this works to help you navigate the really long term.

This chart, in Figure 11.13, was done in 2010 before I figured out how to simplify the warning lines; I used to draw them manually. This is a generational chart going back to the 1970s and you can see I've included what is known as quarter lines. Quarter lines are the dotted lines which are the halfway point in the overall channel. In the late 1980s there was a validation just above the mid line and then it pulled back slightly below the lower rising line by the early to mid-1990s. From there the pattern had a parabolic spike to the upper quarter line before collapsing all the way to the manually drawn parallel warning line. From there the pattern spiked almost to the absolute high before it came right back down to the parallel warning again. It's not exact but it's very close in many instances.

This is a sugar chart, in Figure 11.14, also taken from our *Futures* update around Christmas 2009. You can validations at both quarter lines before a parabolic surge to the upper channel line. The next chart in Figure 11.15 was also taken Christmas 2009. You clearly see the same methodology for the anchor and where the pattern peaks at the long-term manually drawn line. It comes down and bottoms to end the financial crisis at the original mid line in Figure 11.16. At the time this chart was drawn, the pattern was having difficulty breaking through. The reason was the top of the original



**FIGURE 11.14** Long-Term Sugar

median channel line. What I've found is that for commodities/futures charts these channels work best when using the 056 version, which is the weekly volume rollover method chart. The copper chart below, in Figure 11.17, is a bit more complex, as it combines two median channels. You can see the descending channel contained the bear and by the time our *Futures* update was covering it, prices were stalling out again at the descending channel line. Our final chart taken at the same time showed the complete boom and bust cycle in the oil market. Once again this is a long-term progression going



**FIGURE 11.15** Long-Term Heating Oil



**FIGURE 11.16 Long-Term Oil**

back to the late 1990s using a weekly volume rollover chart expressed on a monthly basis to fit in all the candles.

The long-term parallel warning lines caught both the top and the bottom of this incredible sequence in history. Along the way you can see the various validations before the prices got out of control to both the upside and downside.

What we've done here is give you a flavor for what you can do with pitchforks. Complete courses have been written on this methodology. As part art



**FIGURE 11.17 Long-Term Copper**

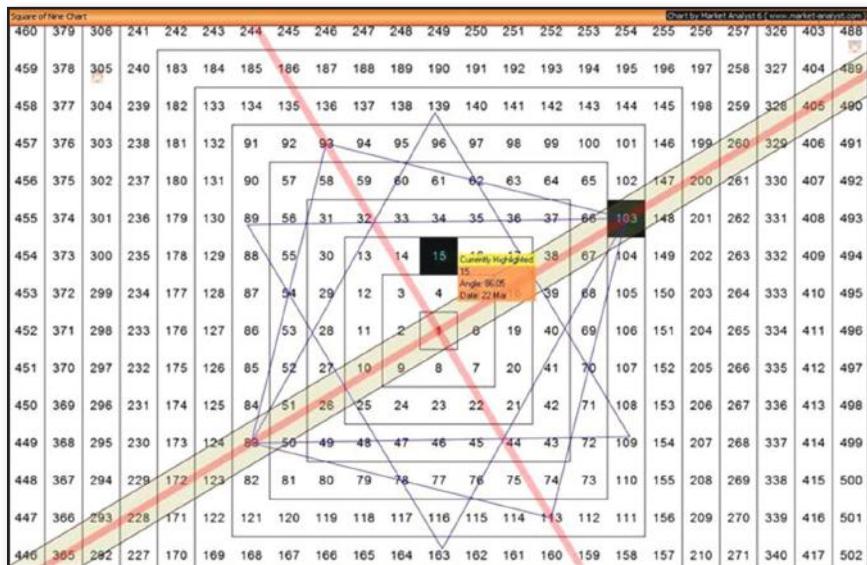
and science, I believe the reason it works is the channel lines act as strange attractors, which is part of Chaos theory. You can trade these lines as well or use them as navigation points. Some setups will be excellent as you'll see in the next chapter when the square of 9 lines up with a particular channel line. You will gain even greater conviction to determine the probability a turn will materialize at a specific line when there is an excellent reading. The most obvious example we discussed here was the 55-week example in the QQQ. That turn was very significant and important to leverage, simply because the Qs represent the whole of technology.

If you want more information on this subject you should look at the work of Tim Morge and Dr. Mircea Dologa.

# Square of 9

This chapter will serve as an introduction to the Gann square of 9. There are many applications and I could go much deeper if this were a book on Gann. But the goal here is to demystify some of Gann's most interesting work, cut down substantially on your learning curve, and give you an edge in identifying important market turns.

The best way to think about Gann's matrix for the square of 9 is to think of it as if you were looking at the top of a pyramid. Each revolution around that pyramid is the equivalent of a 360-degree circle. Figure 12.1 is the matrix.



**FIGURE 12.1** Gann Square of 9

This matrix comes to us courtesy of Market-Analyst software, which has specialized in Gann software for years. Look at the numeral 1 in the center. Figure 12.2 gives you a much bigger overview. Think of this as the top of the pyramid. Just imagine you are in a plane right over the Great Pyramid. You are basically looking at a three-dimensional object in only two dimensions. What Gann did was apply that very same philosophy to our two-dimensional price charts. You've heard from Fibonacci and Elliott people that markets are spiraling in all degrees of trend all the time, right? They don't exactly tell you how they are spiraling or what you need to do to make that information practical. What Gann did was convert the movement from price A to price B to degrees in a circle. Why is that important? Some of the most important turns are materializing in either Fibonacci golden spiral numbers or divisions of that 360-degree circle. A move might terminate at 90, 180, or 360 degrees.

Here's how this works. Look at the extreme left where you see the number 453 and next to it one column over you see 372. The number either one row up or down, one column to the left or right is a 360-degree move. In the world of Gann, everything is dependent on square roots. Let's take the square roots of 453 and 372. We get 21.28 and 19.28. That's a difference of two. So how do we get a difference of two to equal a 360-degree circle? We multiply by 180. So that's the formula. We take the difference in the square roots and multiply by 180 to convert the price movement to degrees in a circle. Is that simple enough for you?

We've just taken years off your Gann learning curve. From 453 move four places to the right and you get 177. Now that you are at 177, let's go

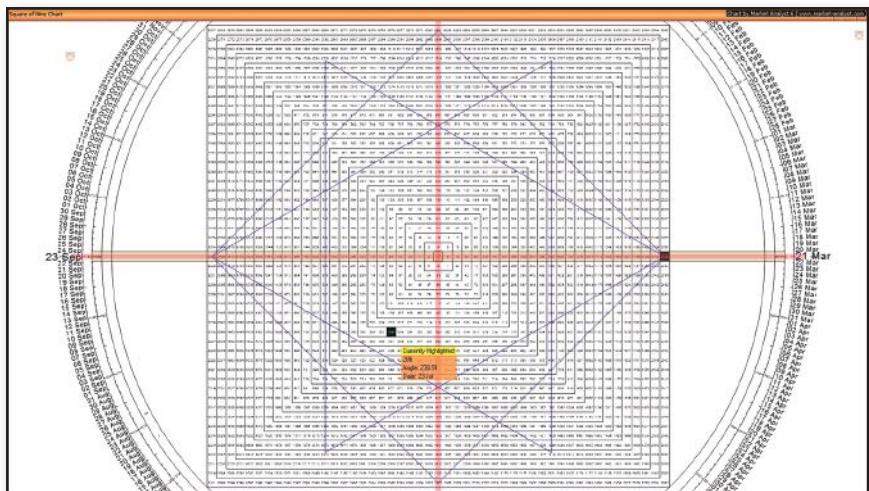


FIGURE 12.2 Larger Matrix

to the mirror image on the other side of the matrix and see what number is opposite 177. That would be 203. The square root of 177 is 13.30 and the square root of 203 is 14.24. This is a difference of 0.94 that equates to a reading of 170 degrees. But the further out you go the closer it comes to an exact 180 degrees.

For instance, when we go to the far edges of this particular calculation, although you can't see it, we are 24 rings out and the number on the extreme left is 2233 and the extreme right is 2329. The square root of 2233 is 47.25 and the square root of 2329 is 48.25, which is a difference of 1. Multiply by 180 and you get a 180-degree turn, which is half of a circle. If we go to the extreme lower left corner the number is 2401, which has a square root of 49, and the lower right corner the number is 2353, which has a square root of 48.50. The difference is 0.50 for a move of 90 degrees. These are the most important relationships on a square of 9.

Now that you have the basics, you don't really need the matrix to convert degrees to a circle. The matrix has many uses, and is valuable, but it's beyond the scope of one chapter. All you really need to do is know take the square root, get the difference, and multiply by 180.

That being said, let's revisit that Dow chart that topped right on the 262 week window back in 2007 in Figure 12.3. As I told you, one of the biggest concerns we had in understanding the strength of our time windows was that they didn't behave the same way. For instance, some 61-bar windows would validate and create longer-term reversals. Others only validated for a short amount of time while still others didn't



**FIGURE 12.3** Dow 2007 Top

validate at all. We wanted to understand the difference why different pivots behaved the way they did. I feel the utilization of the square of 9 greatly closed that gap.

## ■ Important Tops

We know this bull market terminated at 262 weeks but why did it create such a disaster? Let's look at the pivots. The low at 7197 created a square root of 84.83 and the top at 14198 has a square root of 119.15. The difference in the square roots is 34.32 and when we multiply by 180 we get 6177 degrees, or just three points shy of 6180!

When we are working with Gann that margin of error is so slight we ignore it. Let's understand something else that is a mystery to so many. When we are working with different indices or instruments we end up with numbers that are three, four, or five digits to the right or left of the decimal. Feel free to manipulate the decimal point. What that means is that when we are dealing with long-term numbers on a four or five digit Dow we might end up with degree reading that are four places to left of the decimal. A 6180 reading means exactly the same thing as if it were 0.618. A 360-degree reading means exactly the same as a 36-, 3.6-, or 3600-degree reading. The only difference is discrepancy in the time frame. A nice 90-degree move on a daily chart means the same thing as a 9.00 degree move on a 15-minute chart.



**FIGURE 12.4** NASDAQ Top

To give you an example of that, let's look at the very same bull market in the NASDAQ in Figure 12.4. With a low of 1108.49 and a top of 2861.51 we get square roots of 33.29 and 53.49 for a factor of 20.20 or 3636 degrees, which is just a shade over (1 percent) 3600 degrees.

When we get a 262-week time window that gives you a 6180-degree Gann square of 9 move that validates, it's a very serious pivot. When you get another index that gives you a 1 percent margin of error off a 3600-degree move at the same time, that's even more serious. How rare is this? I've never seen such good readings at the same time before or since. So when people talk about the next Lehman moment in the aftermath of this disaster they are not speaking with all the facts. It's pure emotion, which we discuss in the chapter on sentiment and psychology.

As we've seen from the last chapter, there are different means and tests to determine the strength of a pivot. It may or may not have that great square of 9 reading. If it doesn't, it better have one of those squaring of price and time symmetries. The best turns in markets possess one or the other. Your edge comes from identifying these turns and leveraging the information as we discussed earlier. Had more people recognized the 2007 top for what it really was they could have saved their 401(k) accounts. But Gann's work has been largely ignored over the years. Why is that? Looking at Gann, he used to charge around \$5,000 for his home study course, but he gave you the information and wanted you to pay your dues and figure a lot of it out on your own. It's almost like Mr. Gann would come to your house, drop a 1,000-piece jigsaw puzzle on the coffee table, and then leave you to put all of it together. Some figured it out, many didn't. Many more people have figured out bits and pieces of it.

Also, the Wall Street culture probably relied too heavily upon the models designed by academia which are linear and do not take into consideration what happens when human emotion goes to extremes. Linear models are great when the action stays in the bell curve, but when it skews too far one way or the other, something like 2008 happens. You can see they certainly were not prepared for a perfect Gann and Fibonacci storm.

Now we can fully explain the oil chart from 2011.

These are the daily and weekly charts of longer-term oil back in May 2011, shown in Figure 12.5 and Figure 12.6. It was a perfect storm where the square of 9 registered 903 degrees and on a daily chart was 609 trading days off its bottom. We don't see calculations like this very often. Remember, a 903-degree move is the same thing as a 90-degree move, which is fairly significant in the world of Gann.



**FIGURE 12.5 Oil Perfect Storm Part I**

This is what our newsletter showed clients at the time. Unfortunately, this turn took the financial community by surprise. You'll recall right before this happened U.S. forces took out Osama Bin Laden and the media was looking for a big rally based on the euphoria of the end of the notorious Al Qaeda leader. Mr. Gann and Mr. Fibonacci had other ideas. When oil turned, all of the market's inverse relationships kicked in. The U.S. dollar made its most important bottom in a very long time and equity markets peaked. Everything that was going one way flipped to go the other way after this calculation materialized.



**FIGURE 12.6 Oil Perfect Storm Part II**

As a sidebar, the drop stopped going down at 178 degrees which is close to 180 degrees and moved back to the mid line of an Andrews's pitchfork, which meant the 180-degree turn was a complete trading leg (not shown).

## ■ Regular Action

Obviously we don't see that kind of situation every day. What you will see more often is a combination of support/resistance polarity flips and the square of 9 reading. Look at the low in the middle of the page at 264 degrees (close to 261) in Figure 12.7. Now watch the bounce. It tests the underbelly of the high and fails. It retests that 264-degree low. What happens next is fairly significant. The entire move up for this small-degree ABC is 61.2 degrees, which is another application of Fibonacci in Gann but from the secondary low it's also 45 degrees, which is a very important reading. Most important is the cluster of 61.2/45 at an important polarity flip. All pivots are not created equal and you can see what happens next. The next chart, in Figure 12.8, shows you an average day in the NQ with various setups and the square roots of the price pivots. The first low is a move down with a factor of 0.31, a reading of 55.8 degrees, which is Fibonacci 55. Significant to this chapter is the first pullback at 16.2 degrees, which in terms of larger picture may be a good setup but doesn't show buyers taking control in terms of the candles on this reversal. It might on a 5- or 15-minute chart. The next significant reading is near the high with a 14.4 degree pullback, which doesn't



**FIGURE 12.7** Ordinary Action



**FIGURE 12.8** NQ Avg Day

give you the great reversal candle either. Most significant is the high with the 163.8-degree reading, which is close to 162 and does end up giving you a decent candle reversal. We get this calculation from a square root 47.73 low, which is not seen on this chart.

The next chart is a quick example of combining simple trend lines with a low at a factor of 3.76 for the leg (47.06-43.30), which is close to Fibonacci 377 in Figure 12.9.



**FIGURE 12.9** Wedge Lines



**FIGURE 12.10 Wedge Lines II**

One of the gaps the square of 9 closes is the condition of ascertaining the chances the ordinary pivot will turn at one of our time windows. This is one of the breakthroughs since the first edition came out.

This late 2012 dollar chart, in Figure 12.10, is an excellent example of what I'm talking about. From the secondary low the peak is 61 trading days up. We get a good candle reversal formation at the high, but we may need more to develop conviction about a move. On the original version of this volume rollover continuation chart the square roots of the high and low were 28.04 and 29.04, a factor of 1.00, which translates to a 180-degree move. Not only do we get the 61-day turn but also an excellent calculation coming from the underlying structure of the market in terms of the Gann work.

Here's another example of an excellent pivot at 162 hours where it doesn't hurt to have a backup calculation in the square of 9 which is 36 degrees, a perfect marriage of Gann and Fibonacci in Figure 12.11.

I included the crash course on Andrews because of examples like this here, we have a strategy of using an Andrews pitchfork and combining it with the timing window and the square of 9. At the time we covered this sequence in the Short Term Update, the difference in the square roots of the high and low was 0.20, which gave us a 36-degree move. Like the earlier NASDAQ chart, this one being only an hourly chart it's not possible to get a 3600-degree move, but the implication in a 36-degree move is exactly the same. In this case the cluster of 162 hours, 36 degrees, and the bottom of



**FIGURE 12.11 Gann and Fibonacci**

the channel were three excellent reasons to believe in a turn and take a trade long. If you look closely you'll also see a bullish engulfing candle pattern on the reversal, which is usually a high-probability formation.

While we are on the subject of Andrews, here's another example of the combination of how the square of 9 and channel line can produce a high-probability turn. This pullback in QCOM had a high of 45.75 and a low of 42.45 in Figure 12.12. A quick conversion gives us square roots of 6.76 and 6.51 for a difference of 0.25. That 0.25 difference translates in our formula to a 45-degree move, one of the best calculations you'll ever get with a



**FIGURE 12.12 45-Degree Move**

square of 9. When that clusters with the Andrews mid line it should be taken seriously.

Here's an important point to note when using Gann that a lot of people fail to understand. Gann work is not a crystal ball. People always wonder when they calculate ahead to figure out where the 45-, 360-, or 3600-degree target is. So the price action gets there and they automatically put in the order to play a reversal. Then it doesn't happen and they get stopped out. This is not what Gann intended. In case you've noticed, this is hard work. To make life easier we don't have to be concerned about every few degrees or every level. Wait until the candles give us the reversal, then we do the calculations to see if anything is there.

If it turns out we have a 162-bar window it should be treated as a flashing yellow light, but not until we actually have a reversal should we run the Gann number to see if the reading means anything. Obviously life is a little easier when we do have a good time window clustering with a key Andrews line, but the market doesn't always give us such a condition. Many times we get no reading of significance and we should view it as a fake. If we don't get symmetry or a square of 9 reading, chances are the move will extend. But when we do get the cluster of time window, channel line, and square of 9 reading we should view it as very significant and develop the kind of conviction about the new move that it can go further than most of us realize.

## ■ Fibonacci and Gann Readings

As important as the 45-degree reading is the 90-degree marker. One of the most important 90-degree readings we've had in recent memory came late in 2011 in the bond market, shown in Figure 12.13 and Figure 12.14. The *Short Term Update* identified this low as a 90-degree line and, given it was a move into prior support, we felt it could become a major floor in the market. This is exactly what happened. As the calendar turned into 2012 sentiment got very bearish and headlines suggested a long-term top was in place just at the time the low was being retested. We didn't accept this view simply because of the 90-degree reading at the low, which was not violated. There are two things to note here. First is the 90-degree low was a very significant turn, but as it retested the upper end of the range we felt that the 61.2-degree reading could lead to a trading range. As it turned out, the 61.2 degree turned into at least a two-week range at the time, but prices actually stayed in the same general area for the next four months before taking off.



**FIGURE 12.13 Bonds 90-Degree Move**

As of late 2012 that 90-degree floor wasn't even close to being violated yet. The bottom line is the conventional wisdom was looking for a top but the majority of the traders in bonds had no idea how good the calculation was at the low.

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Another important 90-degree reading came in at the end of an approximately 26-day correction in McDonalds in January 2011, shown in Figure 12.15. What is fairly significant here is the square of 9 clusters with the 200-day moving average.



**FIGURE 12.14 Bonds Part II**



**FIGURE 12.15 MCD 90 Degrees**

In this case the high of 80.94 and low of 72.14 created square roots of 8.99 and 8.49, a factor of 0.50.

We've already seen how significant a 6180-degree move can be in the Dow. Here's a 619-degree move in the Financial sector of the ASX, which created a nice trading leg shown in Figure 12.16. The takeaway to being a trading leg here isn't just the golden spiral calculation exclusively. Notice how this leg tests a prior low, which is as important or more important. In this case you are automatically looking for support as any trader would.



**FIGURE 12.16 619-Degree Move**



**FIGURE 12.17 619-Degree Violation**

But as you see three pivots of prior support what a trader can't know ahead of time is which pivot is going to be ultimate support. When we do get the turn and realize it is right near (just a point off) an important golden spiral number we can develop some conviction about the move. At the end of the day we can take a trade from a golden spiral reversal and we can take a trade from a retest of support lines, but when we get a combination of Gann and important support we can develop a feel for the importance of the turn. It becomes a high-probability trading leg.

We really haven't discussed what happens when an important Gann level violates. But that's what happens in Figure 12.17. It's the same thing as when an important time window is violated. It means the underlying structure of the market is strong and it will take a strong wave to take out an important reading. When it does, it usually won't violate by just a small amount. We'll get a major violation as you see here. This leg violates, retests the horizontal line from the other side, and travels a good distance away from the 619-degree line.

This low was very significant at the time because it coincided with the Japanese earthquake/tsunami disaster. On the bigger ASX 200 chart, in Figure 12.18, we had a similar bottom. That chart gave us a similar 612-degree (Fibonacci 610) trading low. The bounce ended up making a higher high at 4976. The 4976 handle was important because when we manipulate the decimal point it comes to 497.6 but when we round up to 498, at 498 weeks we come within a handful of days to the very significant low around the end



**FIGURE 12.18** 612-Degree Low

of September in 2001, which we know was a significant bear market trading low after the 9/11 tragedy.

This was the high that led to the big leg down in 2011 that led to the debt-ceiling crisis in the United States as well as the Greek crisis in Europe.

Hopefully you are developing a feel for how to use the square of 9 in the bigger macro picture. The most important takeaway you should get from this exercise is to realize that when we get a good reading you can develop the conviction about the turn. Not only does this relate to the actual reading which you've seen is on an important sector or index, but armed with the knowledge you'll be in a position to understand why the market turns when it does and the trades you take either on a swing or intraday basis should be going in concert with the larger trend. The idea is for you to be on the right side and stay with it until you see evidence to the contrary.

To conclude this chapter let's take a look at a few more micro type opportunities. Sometimes the market will throw you a curve ball and you won't know how important it is. To this point we've seen pure degree plays clustering with other technical data. Can the square of 9 formula have an impact in another way? This SOX chart, in Figure 12.19, tells exactly how that can work. With the square root of the high at 20.11 and 17.48 at the low, the factor or difference in the square roots of 2.63 (just off 2.618) at 89 days was the information needed to end this correction. So the factor itself could be the important missing piece of the puzzle.



**FIGURE 12.19 263 Factor**

The next example gives us a factor equal to the number of days in the pattern. Recently the soybeans chart had a high square root of 42.34 and low of 37.04, which is a factor of 5.30, shown in Figure 12.20. The time count was 53 days, so the factor was the same as the time elapsed. Once again the factor was more important than the degree. What is important here is the trading leg, which materialized to the upper end of the Andrews channel.



**FIGURE 12.20 Factor and Days**



**FIGURE 12.21 Euro Factor and Days**

A variation to this theme materialized in early May 2011 when oil market topped and the dollar bottomed. Here's the situation in the EUR-USD in Figure 12.21.

Here we have a move of 239 degrees in 237 trading days. It's similar to the examples in the prior chapter of advanced squaring of price and time. This time we are not squaring the factor with the trading days but with the degrees of movement. When it comes to Gann it would be wonderful if we could get perfect symmetry like we did on the soybeans chart, but many times close enough has to be good enough. Two degrees in the bigger scheme of things is close enough. This is a science but it's also an art, so you'll have to use your best judgment. Here the EUR-USD is part of a major reversal in all markets, so all you really need is a little common sense. But let's talk about another important concept with the square of 9. As you know we are dealing with instruments that are four or five places either to the right or left of the decimal point. Currencies are most complex. In order to find what works you'll have to experiment to see how you should manipulate the decimal point. With the EUR-USD you can see the decimal is moved two digits to the right to make it work. In this case we have a low 1.1876 and obviously the square root is not 10.89. However when we move over the decimal point two digits we see the square root of 118.76 is 10.89. At the top, the square root of 149.39 is 12.22. The factor is 1.33, which translates to a 239-degree move.



**FIGURE 12.22 Reverse Engineering**

The next example, in Figure 12.22, is best described as reverse engineering. Sometimes we won't measure from the absolute high to the low. We'll measure the distance from the high to the secondary high.

In this case we have a top in the ASX Materials sector at 17381.70 which rounds to a square root of 131.84. It's the all-time high in 2008. After the financial crisis completed it made an important secondary high along with the rest of markets in 2011. This peak was 15093.30 and it gave us a square root of 122.85. The difference from the high to the secondary high was the key missing piece to the puzzle. The factor was 8.99, which is actually close enough for 89 or 90 but at the end of the day translates to a reading of 1618.2 degrees. Not only do you want to look at the factor, you also want to look at the difference from an important pivot to a secondary pivot. That can be important when you are looking at a triangle where we are looking for a termination point.

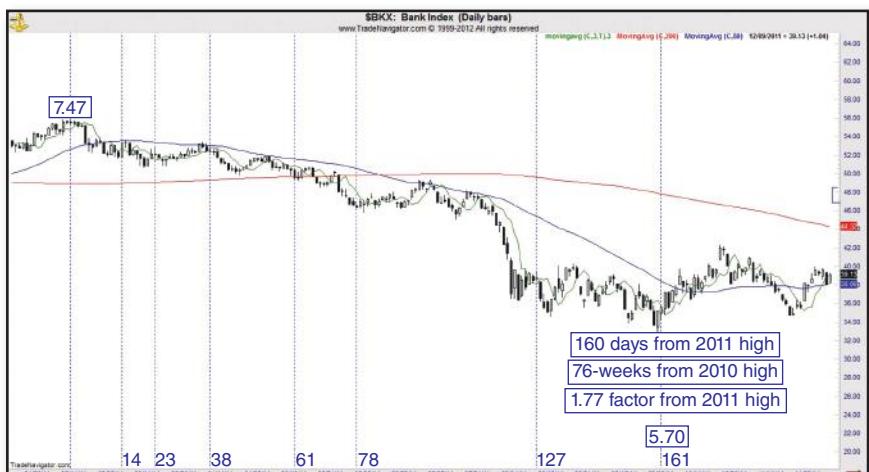
To confirm a triangle, many times we measure the outcome from one extreme pivot to the termination point, whether that point is an extreme pivot or not. In this case on an hourly EUR-USD, in Figure 12.23 we have a move of 14.4 degrees (Fibonacci 144), which is not the absolute bottom but can be considered the end of a triangle. This move is followed by a 16.2-degree move to retest the high. What you should take from this intraday chart is that in smaller time frames we'll end up with smaller numerals, which carry the same weight as the larger. That means 14.4 has the same significance as 144 and 16.2 has the same meaning as 162.



**FIGURE 12.23 14.4-Degree Move**

Our last example is the confluence of factors that combine the advanced squaring of time we learned in the last chapter with the square of 9 and the basic time windows from the first edition. We've looked at this chart before, but we'll extend it out to the 2011 bottom.

There's a lot going on here, so let's take it slow. This is the BKKX at the bottom on October 4, 2011 in Figure 12.24. Most obvious is that you see the 160-day bottom, which is basically where the first edition leaves off. The mission of this new edition is to uncover situations like this. It wasn't enough



**FIGURE 12.24 BKKX Cluster**

to have the 161-day window. I wanted to know what else might be going on that could contribute to a major turn in a market. Right here from the 2012 peak to the bottom we take the square root of the high and low ( $7.47 \times 5.70$ , H55.88-L32.56), which gives us a factor of 1.77. On the surface that means almost nothing. However, when you look at the weekly chart we find the absolute bottom at the end of the financial crisis is 17.76. With a manipulation of the decimal point we have a square between the absolute low and the factor of the square roots that ends the debt ceiling crisis sequence. By itself it's not likely going to do that. However, now we look at the weekly chart again and find the square root of the high of 58.81 is 7.66. The low on October 4, 2011, off the high of April 21, 2010, is 75.86 weeks when rounded up is 76 weeks in Figure 12.25. This is important on several levels. Most notably is we wanted to know how powerful an important turn can be.

The more calculations/symmetry that we have, the stronger the pivot. The stronger the pivot the more we can get conviction about a new move. The more we can get conviction about a new move, the bigger edge we have as time goes on because the trader can draw confidence when pullbacks and corrections come that the correct move is buying the dip as opposed to selling a rally. As I've said earlier, if you can find these symmetries on critically important sectors like banking it will influence your entire view of the market. Then it's just a matter of finding the micro opportunities in the areas you like to play.

On the next level, it's important to know how deep one must dig in order to uncover the market's hand. In this case we have to dig deep enough to the



**FIGURE 12.25** BKX Part II

factor level to tie the secondary symmetries (off 2012) to the absolute bottom. But we also have to match the time and price by way of the square root to the time window. I don't advocate having to dig this deep all the time. You certainly don't want to miss trading opportunities because of paralysis by analysis, but you certainly need to do this work on major turns. If you don't, you'll miss something critical and may end up on the wrong side of the market.

As it turned out this low held through the two European crises that plagued markets in the fourth quarter of 2011 and again in June and July of 2012. Most Euro bears were calling for Greece to be the next Lehman moment for a long time. Had anyone taken the time to check deep under the hood, they would have found extraordinarily bullish readings for the banks.

Finally, you can see this is so much more than just a 160-day window that created a trading turn.

We've looked at a lot of numbers in these Gann chapters. Numbers are the universal language of markets. Many people look to balance sheets, earnings statements, and P/E ratios. Those are numbers and certainly these fundamental numbers paint a tale of the quality of a company or index. But what they fail to do is tell you when to enter or exit. We've seen a progression where the developing trader starts out looking at an oscillating indicator, which gives you an idea what a market is capable of doing but has very little precision. What we've done is introduce market timing in order to help the person who used oscillating-type indicators gain greater precision. In our development we noticed that timing windows work much of the time, but there are times when they either don't work or do work but the pivot created doesn't last. We wanted to know why and dug a level deeper. What we found was the market has a symmetry all its own that is simple to understand but not so easy to find. We also learned that we can convert a move from point A to point B and convert to degrees in a circle because we know that markets are spiraling in all degrees of trend all the time. Gann gave us a formula that allows us to do it. In this evolution, we've gone from using a lagging indicator to the highest form of pattern recognition where we no longer need to be concerned about oscillators. In this evolution we can identify opportunity and enter a trade with a better risk-reward ratio because we can enter closer to the point where the reversal materialized. We've also closed the gap in our understanding of pattern recognition, which is a key to developing conviction about a move as we cluster the Gann work with other excellent pattern-recognition tools like time windows, support/resistance, and Andrews pitchforks.

If you are still using lagging indicators it will take some time to adjust and transform yourself from one system to the next. It's not a process you'll accomplish in a day or a week, but if you stick with it you'll get proficient at it sooner than you think. The key point is persistence. You'll have to observe these symmetries and calculations in a variety of markets to feel comfortable with them. You'll have to do it in both bull and bear phases, plus trading-range types of markets.

# Psychology

When we talk about psychology there are two aspects to it. There is you and then there's the market. Right now we'll talk about you. Trading is tough enough and believe it or not, some people aren't even trying to make money in the market. Let me repeat that, some people treat the market as a way to get back at themselves as punishment for other things they've done in their life. This is called sabotage. Do you think it's not true? It all gets down to your belief system and the values you've developed in life. Taking it one step further, some people don't have a prosperity mindset and just when they get to the cusp of something good, they find a way to muddy the water.

Other people treat financial markets like their personal casinos. Why? Being in the action is more important than making money. I know this sounds strange, but there is a group of people out there who get the endorphins going only when they have a position in the market. It's the same thing as going to Las Vegas or Belmont Park. Trading can be an elegant form of gambling without the stigma attached.

My job is to bring all of this to your attention. There's not much I can personally do about it, but hopefully some of you who might be in this boat will take a personal inventory of yourself and become aware of any issues. Then again, if you are under extreme duress in your life you probably shouldn't be trading because you won't be thinking clearly. It is my belief that you can't even get to the game if you have larger issues that are distracting you. We live in a complex world where many people have to deal with life issues that have nothing to do with financial markets.

If your mind isn't right, there is no methodology in the world that will work. What we are going to do in this chapter is review various works from

different mentors of mine in the field of psychology and mental toughness. Over the years the lessons I've learned from each one of these sources has provided me with priceless tools, not only in trading but in life. I would urge you to check out every one of them because they all provide valuable information.

I do have to tell you one gambling story about an old friend. Several years back, AAPL was trading under \$100, which tells you just how old this story really is; we could've put this in the first edition. But it was the time of year when AAPL had the annual meeting and in those days the stock tendency was to find a high. In this particular year there were some really good timing calculations at the time of the annual meeting. I didn't particularly care about the meeting; I was interested in the readings. So my friend bought a bunch of puts because he felt the stock would drop. He bought the puts at around the 97 handle, and soon thereafter the stock was down to 80. I don't remember what the original investment was but suddenly his puts were worth \$40,000, a lot of money for this person. I happened to follow it for him and by the time it got to 80, the stock hit 161-bars down and turned. I told this person he should at least take a portion of his huge profits off the table if not all of it. He got mad at me and told me I was jinxing his position. He was holding for at least a minimum of 70 and hoping for 60. This was a person who had a troubled marriage and a serious gambling problem in the past. Who else would tell a person he was jinxing his position? Within three days the stock was back over 90 and most of the \$40,000 evaporated never to return and my old friend hasn't spoken to me since, about five or six years from the time I'm writing this. I don't think he cared about the money as much as he enjoyed being part of a winning trade and didn't want it to end.

## ■ Gambling and Trading

So what some of you might have to look at is the kinds of setups you take and how long you stay, then analyze how you treat your winners as well as your losers. There is a big difference between gambling and trading. Briefly, you are trading if you treat your trade as an investment or a business deal. You have an entry that you've decided the risk as well as the potential move, so you quantify it along with the odds of what you envision might actually happen. Some educators will quantify risk as two to one, three to one, or greater. I believe it depends on market conditions. If we have a discussion about where the market might be in six months from now, there's probably

a small chance of being correct. If we forecast where the markets might be a month from now we have a much greater probability of being right. If we scale down that discussion to next week or tomorrow our odds go up exponentially. If you are a scalper in the E-mini and playing for two points with a stop loss of two points and there's a very high probability the market would achieve those two points in the next half hour, your one-to-one risk might be better than anticipating a six-point gain with a three-point stop. Does that make sense? But let's say you have that six-point gain after a three-point stop loss at the entry and you achieve those six points, but the price action is now bumping into resistance, holding the position and risking those points already earned to go for a bigger score really is gambling. If that's you, take a hard inventory of what you are doing.

Gambling is insidious and appears in a variety of ways. But if you come to resistance after a nice gain and suddenly your edge is not there anymore and it's a coin flip as to whether it will break through, if you don't go to the bank then you are gambling.

Anyone with a bankroll can participate in financial markets. We saw cab drivers, waiters, and Ma and Pa Kettle buying stocks in the late 1990s. Nothing against these people but they all had one thing in common. Most had a layman's understanding about the stock market, yet a bull market made geniuses of them all. It got to the point where seemingly intelligent people quit their professional day jobs in order to become day traders. You remember that. Day trading offices sprung up like weeds all over the landscape. Where are they now? What happened to all of these people? Those people did not have the pattern-recognition skills and most of them were gambling whether anyone cares to admit it or not.

If you are still reading, you know that coming to a true understanding of financial markets may be simple but it isn't easy. It takes years to understand what is transpiring on these charts. It also takes years to develop the necessary discipline to master what you need to know in order to pull the trigger at the right time. The methodology you see in this book comes after years of learning from mistakes and refining the methodology after key blunders.

I was given the opportunity to be a trading partner in the futures market with a very wealthy individual. I had an office in his house where I traded a portfolio of stocks. He traded the ND, which is the futures contract based on the NASDAQ. Each morning we would set up a strategy for the markets for that day. The *Fibonacci Forecaster* newsletter that now goes around the world used to be an exclusive Elliott Wave-based analysis of the NASDAQ for one client.

My partner would trade one to three contracts, which were worth \$100 a point. This may be small potatoes to the institutional traders who will read this but I can assure you that is a respectable amount of money to a private-party retail-type trader, especially after you pull the trigger. What would happen is my partner would enter a trade, watch it for an hour, then leave to go take care of other business interests. Sometimes he would just get a massage. He would summon me out of the bullpen and put me in charge of the trade. For me, many times this was like being thrown into a game in the ninth inning with the bases loaded and nobody out. I know how Mariano Rivera must feel. Many times the trade wasn't going well or still hadn't been decided. I had to make key decisions to minimize his losses or if the trade ran in our favor, not pull the plug too soon. Since my income depended on what I did, you would have to say I was under considerable pressure.

Since those days did work out I would have to say I learned that I could come through under pressure and it was one of the most valuable lessons of my life. It has given me the confidence to do everything that has come since then. But the important lesson is one should only trade to the size of their bankroll and what they feel comfortable with. If you are only used to trading for \$20 a point and fall three points behind in a trade, the \$60 won't make you feel the heat as much as if you are trading at \$100 per point and suddenly find yourself hundreds in the hole. It could be thousands or a lot more given some of the massive mistakes made by the guys at the energy hedge fund or even the Corzine traders at MF Global. I don't know that we'll ever know the truth, but someone's despair caused them to dip into the \$1.6 billion that turned up missing.

We all experience losses and we must learn from them. One of my early mistakes was buying call options on the day Gateway topped back in 1999. I don't remember the exact numbers, but Gateway had made a move from the 50s up to 80 and that was the day I bought call options at 9. By the end of the day Gateway was down to 76 and my call options were trading at six. I had no technique or methodology back then and I figured if I was going to last in the trading game for even two days I better learn what I was doing. As I grew I came to some stumbling blocks and dedicated myself to overcoming every obstacle.

What I'm trying to tell you here is that you wouldn't expect to become a doctor or a lawyer without the proper training. It takes years of schooling just to be allowed in the game. On top of schooling you must serve some apprenticeship in the real world before you can be truly great at anything. So why would anybody think trading would be any different? History has shown

us that people start out in trading to get rich with no formal training and think it is all very easy. They learn very quickly it's not.

I'll tell you why people think that way. First of all, you don't need a degree to put on a trade. Anybody with a computer or a phone can do it. It irritates me to no end to see these late-night infomercials claiming that anyone can learn to be a profitable trader in one weekend. Many people also mistook the bull market for brains. Easy money from a bubble comes once in a lifetime. Some of you who are going to buy this book are going to put it on the shelf and gain nothing from it. Others might read through it one time to get some salient ideas. However, this book was really designed for those of you who are serious enough to rip into it. Most of these charts need to be studied for hours to really understand what is going on. You'll study them, go to your own charts, make your observations, and then come back to these charts over and over. That's the only way you are going to learn the true nature of how these financial markets really work. Understand I am not claiming you can master this stuff in a weekend. I am claiming that when you do master this material you will never look at a chart in the same way your old self did. You will have the potential to become very profitable. If you are already profitable you should do even better.

But potential means having the ability to do the right thing at the right time. You still have to do it. When you do you are bringing all of your emotional baggage for the good and bad to the table. You are bringing your current issues in life as well as the values you learned about money while you were growing up. Understand that when you trade, you are not competing with anybody but yourself. Then you have to possess a giant amount of discipline. Unfortunately, many traders who survive end up blowing a bankroll or three before they learn. Unless you grew up in a trading family, chances are the only way you learn what not to do is the hard way, which is losing money. The temptation to do things that were not in your trading plan is great.

There is a lot of noise out there. Your biggest enemy besides yourself will be the maddening voice of the crowd. You have to listen to them yet ignore them at the same time. What do I mean by that?

As you know, during any rally phase there comes a point where the folks on television will tell you we may be at the dawn of a new bull market that will last for years. For oil traders, it was hurricane Katrina. Recall what was happening at that time. Oil was on a tremendous run and elected to blow through every single point of both price and time resistance. It finally got to the point where so-called experts were being paraded on television telling

us oil was headed for \$100 or even \$200 a barrel. Finally, disaster struck and the rigs in the Gulf of Mexico were devastated. To hear the media's side of it, we were going to have oil supplies disrupted for months. Even worse we were told that weather patterns had changed permanently and category three-to-five storms would be the norm for years to come. As it turns out we've had a lot of bad storms lately but surely that opinion is exaggerated when we are going through the event.

Wouldn't you agree it would take a mentally tough person to take all of that in and do the right thing? As you know, the Katrina event was an intermediate-term top in the oil market. Prices didn't go to \$100 immediately, and only a year later Chevron claims to have found the largest oil strike since Prudhomme Bay. As the original edition of this book went to press, prices were trading near \$50. We all know what happened in the financial crisis. Oil was way up there, but also got down to levels nobody could have imagined either. You have to take the bloated claims of the media and put them in context, which we'll cover in the next chapter.

What we need to do is pay attention to what the crowd is saying and interpret what it really means. When it comes to commodities, absolute fear is usually a top. When it comes to the stock market, absolute fear is usually a bottom. When the experts tell you stocks are going to the moon, that is when it's time to think about short positions. You then wait for the appropriate signal.

We have to train our minds to be able to take trades intelligently in psychologically uncomfortable positions. Stress the word *intelligently*. Anybody can pick a top or a bottom and get stopped out. It's not so bad to get stopped out, but doing so excessively begins to add up and drain the bankroll. What we've covered in these pages is giving you intelligent choices of how and where to go against the trend.

## ■ Overcoming Yourself

The first thing you must do is deal with your own demons. There are any number of works on the psychology of trading, but the best in my opinion is *Trading in the Zone* by Mark Douglas. The other one is *New Trading Dimensions* by Bill Williams. Each one prepares you to learn how to get into a flow state of mind. A flow state of mind is where you tune out all distractions, fears, and anxieties and get in rhythm with your highest potential. In terms of trading it's where you allow yourself to take advantage of all the hours

of study and practice to actually do in real time what you've been training yourself to do.

To get to that point, most of us have a fair degree of mental garbage we must put out of our minds. For most of us, this starts in childhood. Children have the most curious and inquisitive minds. It's the adults (parents), while well intentioned, who end up wrecking it. Of course, your parents had to teach you not to put your hand on a hot stove before you had to learn the hard way. As we get older and start school we learned to conform to a certain set of rules in school that ruined our childhood creativity. By the time we get to junior high school we have peer pressure to dress a certain way, act a certain way, and perform sports at a certain level. There is no payoff to being odd or different.

We all have a psychological need to conform to peer pressure and be accepted. If you ever listen to interviews with some of our greatest entertainers, the one thing they have in common is a rough childhood. Many were misfits and stood out from the crowd in some derogatory way when they were growing up. Bruce Springsteen was a misfit as a youngster and I've heard him speak about how he endured his childhood. I also remember Sharon Stone stating she was the ugly duckling in high school. That is hard to believe. Lately, former hockey coach Jacques Demers has emerged as a spokesperson for children living in homes of domestic violence. Mr. Demers claims he grew up in a home where an alcoholic father used to beat his mother. This was so psychologically damaging he couldn't pay attention in school. Mr. Demers went through most of his adult life hiding the fact he could barely read or write. This is an individual who actually was the Stanley Cup winning coach for the 1993 Montreal Canadiens.

Some of us have to overcome our families, others have to overcome the tremendous urge to conform, and some of us have to overcome both.

In simple terms, we know that to be accepted while growing up we must have the latest hairstyle, wear the best blue jeans, and not be a geek when it comes to playing sports. God help you if you are not coordinated to the point where you can't run, catch, or throw a ball of some sort. Of course, if you can't do any of the above you are likely to fall in with the crowd that does drugs. Even if you are one of the boys who excel at sports, you may still experience peer pressure to smoke cigarettes or pot, snort cocaine or drink alcohol to excess. These days, the problem is out of control due to the bullying issues our children deal with all over the country.

What does this have to do with financial markets? We learn at any early age to model the behavior of the crowd, which is our peers in school, and

we also learn the painful implications if we don't. When we get to the point of having to deal with financial markets this can be a bankroll buster because our success depends on our ability to go against the crowd. For most of us, it's the first time in our lives our success may depend on going the other way.

If you've had a rough upbringing like Mr. Demers, it only compounds the problem.

Douglas spends the better part of two books discussing how the psychological scars of life affect our ability to trade profitably. For the most part, he confines his commentary to what happens in the early part of our trading careers as psychologically damaging to the point where we are unable to pull the trigger on trades even when we finally get to a point where we know what we are doing. I'm going to expand on that concept.

Our parents, teachers, or friends may have told us at a young age that we aren't good enough. I grew up in a lower-middle-class neighborhood where 99 percent of the people worked nine-to-five jobs they hated all of their lives, waiting for that Rolex watch at the end of the rainbow that never came. If you showed any inclination for creativity or wanting to break out of the box, you were looked at as odd. However I grew up in the same neighborhood that produced Neil Diamond and lately basketball star Stephan Marbury. One was a great musician and the other a basketball prodigy. The vast majority of people in that neighborhood never had the opportunity to think outside of the box. That being said there is absolutely nothing wrong with that, but the vast majority who grow up in that kind of environment don't ever get the training to succeed in the rough world of financial markets. There are a lot of neighborhoods like that in the country.

Douglas states correctly that if you suffered losses to any important degree in your trading career it can affect your ability to function successfully in the present. This can be anywhere from one trade where you had extremely high expectations to a string of losses that caused you to lose one or more bankrolls. It is the truth that some traders have to burn through several bankrolls before they overcome their learning curves to operate successfully. It is also true that some traders only develop the patience not to overtrade because of the losses earlier in their careers (38-56).

The trading partnership I discussed above seemed perfect, so how come it didn't last? My partner was one of the few people you will ever meet who had a virtually bottomless pit of money (a large trust fund) to overcome all of his mistakes. This man just couldn't pull the trigger by himself in an uncomfortable situation. On one occasion we were watching the long bond during a topping phase. I told him it was going to top and he finally put in a

sell stop just below the high. Well, after the bond topped, it went sideways for about six days before it finally rolled over. As I went to work that morning I was greatly excited in anticipation of a great day because I already heard on the radio that bonds started dropping. Wake up \$4,000 richer, right? Wrong! When I got to work my partner told me he gave up on the idea of bonds dropping and cancelled the order the night before. He didn't even have to do anything! The order was already in and if it got triggered we were in the trade. If the market accelerated to the upside we lost no money because we weren't in the trade yet. But, no, he couldn't wait, as the stress of waiting obviously triggered a painful experience from his past.

The point is this individual suffered so many losses over the years that he had a self-sabotage program deeply imbedded in his mind that prevented him from being a good trader. The amazing thing is this was a person who was born into wealth and had a bottomless pit of money at his disposal, yet he also had a poverty mentality when it came to trading. If he could be traumatized by losses, what does that say for the rest of us?

Not only do we have to overcome the urge to conform or a rough upbringing, but also the regular disappointments and adversities we all have to deal with. What can these be? Let's look at a list of common adversities life throws at us. Each one is very high up on the stress meter.

1. Death of spouse, parent, child, or close friend
2. Divorce
3. Loss of job
4. Relocation to another state
5. Personal illness

These are the most stressful events that can happen to an individual. Your mindset when one or more of these events happen will determine your ability to overcome this adversity. Some people will never be able to overcome these adversities. They affect your confidence and ultimately your ability to operate in a flow state of mind. We are all going to lose our parents at some point in time and grieving is just a natural part of living. The death of a spouse, child, or close friend is devastating, especially if it was untimely. I will also say the death of a family pet can be more devastating, as research shows some people are closer with their animals than they are with any human being. While I personally haven't been in this situation, I've been told one never overcomes the loss of a child.

Divorce is obviously tough on the party who is leaving or the party that is being left. There are issues of anger, trust, betrayal, and loneliness not to

mention adjusting to life as a single person after having a partner for many years. I've heard that it takes half the amount of time the person was in the relationship to heal from it. That means if you were in a 10-year marriage you may not get over it for five years. Some people will run a self-sabotage trading script because they feel unworthy and undeserving of trading profits strictly because they were rejected in their marriage. They will play this out in their trading lives. My old gambling friend didn't believe himself to be worthy enough to have a \$40,000 gain in his trading account so he didn't keep it.

Loss of a job can come as a result of layoff, poor performance, company politics, corporate buyout, or economic disaster. Whatever the case, the results can be devastating to your finances as well as confidence. When times were good many people either quit a job or got fired because they were never the right fit for the job in the first place. Now people are just thankful to have a job. But let's put the financial crisis aside for now. People need to make the proper decisions about the right career. Some people are influenced by friends or family to pursue a specific career just because everyone else in their family was the same thing. How many stories have you heard about a person becoming a lawyer, policeman, or plumber simply because dad and grandpa were in the same line of work? It is not surprising they pursued the same path whether they were suited for that kind of work or not.

I don't think I need to tell you what kind of psychological damage that creates when it doesn't work out.

Relocation to another state is tough because we may be leaving our friends and family behind to start a whole new life. This is an issue relevant to a world impacted by the financial crisis. Many people find it's tough making new friends later in life. It seems the friends and connections we make in grade school through college are bonds we can keep for the rest of our lives. We can still develop friendships later in life but from my experience as well as others, we don't seem to give the new people in our lives the same margin for error that we do with people that we've known for 20 or 30 years. There is also a cultural adjustment as well. The United States is a big place and anybody who thinks that New York is the same as California or the Midwest is like the South or West is kidding themselves. Contemporary demographics suggest there are literally millions of people who have migrated to the West and South from the North in the past generation. The North American continent is so large that if it were in Europe it would easily encompass 10 or 20 different countries. The state of California is the world's seventh largest economy all by itself.

Finally, personal illness is a big one. I think many people take their health for granted and only when we lose part of it do we really come to appreciate it. People who have to overcome a variety of issues such as cancer, diabetes, arthritis, or any other physical handicap have to deal with a lot just to be at the starting gate. We live in a tough unforgiving world that really doesn't feel sorry for us. Anybody that has ever survived a serious illness or overcome a handicap knows that is quite an achievement in itself. Many times, when we survive this sort of hardship, we discover an inner strength we didn't know we had.

In my own case, my past includes the discovery of a lump in the testicle with the fear it might have been cancerous. The visit to the doctor was not encouraging, as he was very concerned and gave me the Lance Armstrong inspirational speech. This was when Lance Armstrong was still considered a hero. The doctor gave me this pep talk before any tests were done. He sent me down to the lab on what they call a wet read. Do you know what that is? It's when you go to the X-ray lab without an appointment (which can take up to three weeks) and go to the front of the line. That's scary.

The next four days were the toughest of my life until the test results came back negative. I remember going to a Super Bowl party when I didn't want to see a soul just to please my wife while the results were hanging in the balance. I can tell you there is no way I could've traded while waiting on those results. But the following Monday the doctor told me the results were negative, and to make it even more interesting he claimed he knew it all along. This was the same doctor who told me about Armstrong.

Later on a medical friend told me why the doctor scared me that way. It seems that not everyone in that position actually goes to the lab. Some people end up in denial, disappear for a year, end up with the cancer, and finally sue the doctor for malpractice.

After that event, small problems in my life didn't seem so significant anymore and I felt I could overcome just about anything. I didn't even have cancer. While I'm not rooting for developing cancer, many survivors do report their illness being the first time in their entire lives that they were totally in touch with their true selves and the ability to overcome extreme adversity.

Don't you think it would be better for the rest of us to deal with our adversities under less extreme circumstances?

Here are some other issues many of us have had to deal with that may affect our ability to succeed as traders:

1. Rejection at a key point in our life
2. Violence or violent crime

3. Molestation
4. A background of extreme poverty
5. Alcohol or drug abuse

The most extreme example of a person who suffered rejection of his life's dream was Adolf Hitler who wanted to be an architect. As the story goes, he was rejected by a prestigious architectural institute in Austria in the same era when his mother passed away. He spent the rest of his life taking it out on the world. That is an example in history, but a current high-profile case of not being able to attain a dream in life would be the case of former Ohio State University football star Maurice Claret. Here was a talented individual who was the star player on a national championship football team. He made a couple of bad decisions by breaking NCAA rules, getting disqualified for a year, and suing the NFL to get in as an underage player. He lost his case as well as his chance to develop his skills as a college player. Despite these mistakes he was still drafted by an NFL team. However, the time off from football took a big toll; he was no longer good enough and was one of the last cuts. The problem was Mr. Claret fell in with the wrong crowd and borrowed money from the wrong people, and when the NFL contract never materialized he was desperate for money and found himself on the wrong end of the law. His fall from potential stardom to oblivion is quite remarkable.

This illustrates an important life lesson. We are all great when things are going great, but what happens when our dreams are denied? What happens when that dream job never materializes? What happens when we are rejected by the love of our life? Have you ever been pursuing the person of your dreams and you end up in a love triangle and they pick the other person?

This is the day and age of reality television, where 25 contestants are competing for *The Bachelor*, *Survivor*, *Rockstar Supernova*, *American Idol*, or *America's Greatest Inventor*. We know going in that only one person can win. They know it as well. What happens to the rest of these people? How do they deal with their rejections? How do you deal with your rejection?

Earlier in my trading career I was encouraged to apply for a position with a small but very prestigious firm whose name you would know as an analyst. I was encouraged to do so by someone very high up in the organization. This not only happened one time, but twice! For whatever reason, both times it just didn't work out and I was greatly disappointed. We are all going to suffer disappointments in our life, but how we react and get off the floor determines our character. We can become like Maurice Claret or we can determine things happen for the best, consider it a blessing in disguise,

and move on. In my case, I decided to carry on with my own research. Had I gone to this firm I doubt very much whether I ever would have uncovered the Lucas series and all of the time sequences that go with it. There are two avenues we can take when faced with disappointment.

The point here is repeated rejections can have an overall adverse effect on our confidence and impact our ability to trade successfully. Some people run a script in their mind, which is an endless loop replaying all of the unhappy events in their lives and they tend to play it out in the decisions they make in financial markets.

I don't claim to be an expert on domestic violence but I do know that victims have very poor self-esteem. The problem for many women is they are codependent on their partners for their stations in life. This could be the big house, car, money, or status they trade because they couldn't make it on their own. So they put up with an abusive spouse. Some women stay for the children. Others who are less economically endowed stay because they fear they'll end up homeless if they leave. The situation for those who do leave to rebuild their lives and take on trading as a form of income later on, still have to deal with the emotional baggage of that time. That's probably why very few people with those types of issues pursue financial markets as a career. Victims of rape, robbery, or even white-collar crimes suffer the same way.

Molestation is the not-so-dirty little secret in our society. Several states are now considering the death penalty for certain offenders. The Penn State University disaster really opened a lot of eyes to how profound this problem is in our society.

Now we realize there are many people walking around who were victims of molestation as young children who don't even realize they were molested, and this issue compounds the problem. Victims of molestation generally have to deal with issues of anger and worthlessness. They have a hard time developing friendships or relationships with the opposite sex. Some victims of molestation actually become molesters themselves. I think these are very tough cases because in order to heal they may have to confront the perpetrator, who many times was a parent. Later in life these people do have trouble holding jobs. The unfortunate part is overcoming molestation may take years of conventional therapy. Many of these people end up running self-sabotage scripts in their lives, and the worst part is they don't even know why. Obviously, you can see how this would impact one's ability to succeed in financial markets. There must be thousands of individuals who have been victimized in this way who are attempting to succeed in financial markets who aren't even aware they were ever molested. You never know what secrets the next person is harboring.

Many books have been written on the subject of poverty. There are actually two types of poverty and we are going to discuss both of them. First of all, there is true poverty and then there is a poverty mentality. The real poverty is where people grow up on the wrong side of the tracks in gang-infested neighborhoods where there is seemingly no way out. These are neighborhoods infested with crime, drugs, teen pregnancy, single parent mothers living on welfare, and very likely some of the worst schools in the country. I think it is very difficult to overcome growing up with a teenage mom living on welfare without a father, being exposed to a life of gang warfare. There are those who try to escape but there are many documented cases of the gang killing anyone showing the talent, individualism, or creativity to rise above it. Probably the only way any one of these kids can get out is through athletics. But they would have to be really exceptional to make it in pro sports because the odds are stacked against them. Just look at Maurice Claret.

It is unlikely any of those people are going to read a book about trading. Let's take a closer look at a poverty versus a prosperity mindset.

Once again, we are greatly influenced mostly by the environment we grew up in. Many of you grew up in a house where your parents said, "Money doesn't grow on trees," or "Save for a rainy day." Most of us developed our attitudes about money from our parents. Others may have learned over the years that to have money would cause others to dislike them. Do you believe if you suddenly took your financial game to the next level it would mean your friends and relatives would start hitting you up for loans? Do you think your friends or relatives would be envious of your success?

Do you believe that having more money means you would have the burden of greater responsibility? Do you believe having more money would mean you wouldn't have the time to enjoy yourself anymore because of this responsibility? Do you believe if you had more money you wouldn't know what to do with it? Do you think you would lose it? If you resonate with any of the above there is a good chance you suffer from a poverty mentality.

## ■ Prosperity/Poverty Mentality

Do you want a bigger house, new car, new clothes, or a vacation? If so, there is a good chance you suffer from a lack mentality. There are only two types of mentalities—prosperity and lack. You either have an abundance mentality or a poverty mentality. There also may be a fine line between the two. I can tell you one thing for sure, if you go around life looking at what you don't have as

opposed to what you do, that is a lack mentality. It's okay to want better things in life, but you have to already visualize being there. You also have to be happy with whatever you have now in order to get more. The dichotomy is if you do well with what you already have, the universe ends up giving you more to work with. If not, it's slowly taken from you. Whatever you focus on expands.

This attitude has a direct correlation with trading. We've discussed just about every conceivable way that mental garbage can get in the way of your trading success. You can now look at your own background and see what may be holding you back. Many of you may not think you have a poverty mentality, but look at your trading patterns.

Do you consistently pick bad setups? Do you get yourself into trades but pull the plug on them before the trade has a chance to work? Do you get yourself into winning trades but hold on too long and end up giving those profits back? If you fall victim to any of the above, you may have a lack mentality and not even know it. How so, you say?

On a conscious level you may want financial success but deep down on a subconscious level you may sabotage yourself. Why? For the reasons mentioned previously. On a subconscious level you may have a fear of failure because secretly it is your desire to fail. It may be your desire not to have money. It may be your desire not to be successful. Impossible you say? As I said above, unless you examine your relationship with money, you really don't know. Your comfort level may only be with what you know, no matter what it is. Secretly, you may think you'll lose your friends if you suddenly made more money. Secretly, you may think it actually is a burden to have more money.

What happens in front of the computer screen is a manifestation of what is going on in your mind. When you go to pull the trigger you are either confident or you are not. You either have a poverty or a prosperity mentality. The way you look at the market is largely the way you look at life. The way you look at life is a result of your background and how you've learned to deal with the various adversities life has thrown your way. We've just covered about every single one of life's curveballs, short of surviving a holocaust.

## ■ Performing Under Pressure

I realize I've just tossed the kitchen sink of mental garbage your way. Will these issues really stand in your way of trading success? The work of Dr. Roland Carlstedt says it might. He is also the author of a sports

psychology book as well as the *Carlstedt Protocol*. Dr. Carlstedt studies what makes athletes come through in the clutch. Here are some ideas that come from an ESPN article called “Brain Ball” by Shaun Assael, which is priceless and applies to all traders.

Each year the National Football League invests millions of dollars in the best players coming out of the collegiate ranks. One high-level mistake can set a franchise’s development back for years. In any event, most of the NFL hopefuls make the annual trek to the Indianapolis Scouting Combine each February where all pro teams analyze speed, size, skill, and intelligence. Even after all of the analysis, the draft is still a crapshoot. Why is that? According to Dr. Carlstedt, “people are paying big bucks for bull—!” What really counts is what these players are going to do in pressure situations.

Some of you may remember the early days of Terry Bradshaw’s football career. I don’t know if the reason is he was from the south and victim of a bad stereotype, but he was considered to a dumb quarterback. It’s not good to be considered dumb when the quarterback position requires one to be exceptionally smart. Whatever the case, before he was Matthew McConaughey’s dad in the movie *Failure to Launch*, Terry Bradshaw won a lot of football games. In fact, he was the first quarterback to win four Super Bowls. You might say he had the ability to come through in the clutch.

What these tests fail to do is predict what a person will do in a pressure situation. There is any number of books written about being in the zone. Dr. Carlstedt set out to prove the physiology of the zone for his Ph.D. thesis. He attached a heart monitor to a 16-year-old tennis whiz for three matches and spent the next year analyzing the results. He filmed the matches and correlated frame by frame with the test subject’s heart rate. He found that his test subject’s heart rate was slowest when he performed best on the court. He found the test subject’s heart rate was fastest when he performed worse on the court. This is exactly the opposite of what Dr. Carlstedt expected! Dr. Carlstedt expected his tennis prodigy would be jacked up to perform well. He thought excellent performance would be correlated by an increase with the internal energy of the body. What he found was physiological proof of relaxation when one enters the zone.

The rewards for performing on the biggest stage are profound. For his guarantee in Super Bowl III Joe Namath has been the toast of New York for the rest of his life. I always wondered how a Namath or a Mark Messier is able to handle that kind of pressure. Now I know.

Carlstedt then created a grid that married his neurological research to three settled psychological concepts: Everyone has the capacity to get

into the hypnotic zone, everyone dredges up bad memories at the worst moments (which Carlstedt calls clutter), and everyone has an innate ability to stop that clutter from interfering with frontal lobe planning (Carlstedt calls this subliminal coping). Think of that last state as having an internal traffic cop who keeps the brain's HOV lane clear. This study became known as Carlstedt's Protocol, which was published in 2001. The American Psychological Association gave Carlstedt their award for best sports dissertation. One reviewer called it "a watershed in the annals of research in sports psychology" and said he "would not be surprised if it became a classic in the field."

Why is this important? Looking at Namath, we know. How many athletes are there in college and the pros? The number is in the thousands. When you compare college or pro athletes to their peer group, for the most part the talent levels are similar. Of course on a bell curve some stand out. But we all know the most talented doesn't always make it and there are plenty of unheralded players who become icons because they perform on the biggest stages. Carlstedt's research is excellent in this regard.

Carlstedt then did a study with a youth baseball team called the Manhattan Gothams. Before the season began each participant went through a battery of physical tests. Carlstedt's ideal would be a player with a high hypnotic susceptibility (easier to get into the zone), low introspection (less mental garbage), and high coping skills (to stay clear of mental garbage). Carlstedt hooked each player to the heart rate monitor before and after each of their at-bats in their season. The data included 1,400 at-bats, which yielded seven stress levels. Carlstedt claims his grid could predict with 87 percent accuracy what each player would do in high-pressure situations.

"He then taught his players mind-body focus exercises and watched their statistics skyrocket. With runners in scoring position the team's batting average went from .351 to .427 and slugging percentage went from .457 to .608." If you know anything about baseball you'll realize these results are phenomenal.

What Carlstedt's groundbreaking work proves physiological existence of the zone. Not only that, we all have the capability to varying degrees to get there. It also proves that despite all of the training an athlete does, there is still an emotional component to success. His work also suggests that negative thoughts will keep us from performing at our best.

The truth is athletes must train for long hours to get their bodies in game condition. Beyond that they must practice long hours in perfecting their techniques as well as studying film of opponents to learn their tendencies.

All of this preparation gives them an edge over their competition. This is not unlike what traders must do to succeed in financial markets.

## ■ It's All in the Mind

A trader must take the time to learn a specific methodology. Many in the field suggest several months of paper trading. Some in the industry claim that working with a simulator isn't the same as real trading, which is true, and the financial pressure is not there, which is also true. However, simulated trading over a long period of observation does allow the brain to develop new neural networks, which accomplish the step of the brain getting rewired which is called neuroplasticity (Dispenza). When you look at charts in a book such as this, it's after the fact and you'll get a lot out of it just like you would from any course. However, recognizing patterns in real time is much different. One must recognize a pattern on a bullish or bear trend, up or down day as well as the sideways-, tight-, or roller coaster-type days. Each presents different challenges. The psychology is different. You wouldn't want to buy the dip all the time. So not only do you have to recognize a particular pattern, you also have to recognize what a particular trend looks like. Let's give you an idea what I'm talking about. Part of recognizing patterns is realizing that bull and bear candles have a different look to them. On these charts we have no symmetries or calculations. This is just pure pattern recognition.

The idea of catching good pivots has a lot to do with the way a pattern sets up and it's different for bull moves as opposed to bear moves. Let's take a look at the difference. Figure 13.1 is a three-minute NQ and could be any day.

The takeaway here is that there isn't just one bar that is the silver bullet sell signal in many cases. Here at the high we have a bullish breakout countered by the bears, another bullish breakout bar countered by the bears. That happened twice in a row. It starts to drop slowly which means bulls are losing power. But then we get a third attempt to go up which leaves an upper tail. By itself, the tail doesn't mean much, but when you paint the whole picture something new starts to emerge. That leads to the drop. So when you are looking at bear moves and you want to recognize which is the right side, you want to look for the upper tails. Elementary, dear Watson? It's simple, but not so easy to comprehend in real time. So when you study these considerations when the market is closed, you start to develop the neuroplasticity so you'll get better at recognizing this in real time.



**FIGURE 13.1 Look At Whole Picture**

Look at this bull move, in the XAU Figure 13.2, compared to the bear move on the next chart. The main difference is the upper tails. You only see one during the uptrend on the second bar of the entire move and that's from a bullish candle anyway. The reason it leaves the tail is people haven't realized the trend has changed already. But look at the bearish move. You can make a case that from the peak there are at least four decent tails, and every one of them would have worked as a short. You can study this chart more deeply and see the uptrend has white candles coming off lows that take



**FIGURE 13.2 Bears Leave Clues**



**FIGURE 13.3 Bulls Take Control**

control of the bears while that really doesn't happen in the bear trend. That's the difference, and I hope it helps you to understand which is the right side of the market.

Finally, this hourly chart of GOOG, in Figure 13.3, shows where the buyers take control. In the beginning it's with a good bar right off the bottom and we'll do a sequence on what good short covering looks like, and this is one of the better ones as there are more white candles above the gap which means the shorts gave up consistently. That's better than the sporadic covering we saw on the oil chart over the past week. But as you'll see below it finally kicked in on Wednesday morning to come off the low as anticipated.

But here we get the pullback and three small but consistent bullish bars. I'd prefer to see one really good bar off a correction like the one at the bottom, but it doesn't always happen that way.

So let's scale down to the same end of the correction sequence and you see the exact perfect bar we are looking for at the end of a correction in Figure 13.4. I've discussed with clients that recognizing the reversal pivot could be one of the most important skills you'll ever have, this picture can be worth a lot of money to you. This is what you are looking for. The problem is you don't always get this quality formation. You get elements of it and have to make a judgment call. One thing you can do to increase your odds is what I've done here, scale down to a 15-minute chart. Of course you'll have lowered your expectations on a trade (without more information that may show up later). The point is that if you don't get the great candle on the daily



**FIGURE 13.4** Perfect Buy Signal

or hourly, but get elements of it, your trade will have to be on a 15-minute basis. On a 15-minute chart this is an excellent trade. But if you missed it, the next day was that failed attempt to go down which you see here with that lower tail. You don't want to be sitting long through something like that. But you can see either from this 15-minute or the hourly chart how buyers finally took control of the market after that lower tail. Going back up to the hourly we have the next sequence where you get a high-wave candle where buyers start to lose conviction, but the next few candles give us lower tails which means bears did not take control yet. But the high wave is an advanced warning signal and eventually bears start to take control, but you start to see the setup for it many bars in advance.

And that's the point of the whole discussion. You can and will recognize the tails telling you the trend, but it's the bars that precede these moves that are the setups and they can start to give you conviction once you finally see the candle fire off the signal.

The bottom line to a discussion like this is patterns look entirely different when they go up as opposed to when they go down. Not only will you have to develop plasticity for any one particular strategy you are attempting to master, you'll also have to develop plasticity to recognize the supporting characteristics that is a bull or bear trend. It takes a while for the plasticity to kick in so the trader can master one strategy under a variety of conditions. That one strategy might really be three different strategies depending on the kind of market.

Once the brain recognizes high-probability tendencies, one can then take advantage of high-profitability situations. The challenge we have as traders is that most of us have a finite bankroll. We need to recognize high-probability tendencies before we lose all of our money.

The challenge that many people have is they possess elements of both a poverty and prosperity mentality. “But Jeff, you already said you either have a prosperity mentality or a poverty mentality, how can you have both?” The truth of the matter is you don’t magically go from one to the other overnight. It is a process over time where you begin to heal yourself. It works like peeling an onion. You can have layers of lack. You can start to heal certain areas of your life but still have others to work on. No two people are in exactly the same place. Many people who would read a book like this already have a bankroll to trade with and unless you are a trust fund baby like my former partner, you’ve done enough right things in your life to have that bankroll. I also believe that if you are dedicated enough to rip into a technical book such as this you already have enough of the elements to succeed at trading. Many of you just need some refinements and adjustments in your understanding of financial markets and in your mind. Others are in the healing process of some of the issues covered earlier in the chapter.

Depending on your background and the amount of stresses you’ve had to deal with in your life, all you may need is a good primer on mental toughness or quite possibly a complete mental overhaul. Since this is a book on timing, there isn’t enough time to cover these methodologies in one chapter, so all we could do is review them. You’ll have to follow up with your own due diligence. But in the very least I hope I’ve brought awareness of your condition so you can do something about it.

Let’s talk about mental toughness training first. How many of you are familiar with Bill Gove? Mr. Gove was the greatest platform speaker in the second half of the twentieth century. He was the first president of the National Speaker Association and also recipient of the prestigious Toastmaster of the Year Award. Simply put, Bill Gove was the Tiger Woods of professional speaking. Mr. Gove lived into his early 90s. Here was a man who had more energy and smarts than many people half his age. Mr. Gove teamed up with a young businessman and former professional tennis player Steve Siebold. Together they formed different success programs; the most popular is the Gove-Siebold speech workshop. In the past couple of years Siebold created Mental Toughness University, a program designed for corporations. However there are programs designed for individuals.

Siebold was a former professional tennis player who by his own admission stated that his lack of mental toughness prevented him from hitting his potential and goals as a tennis player. He lacked the dedication to take his practice level to the point where he played consistently in the zone. Whatever the case, when his career ended he decided he was going to model the skills of people he considered were world class in mental toughness as well as success. How does one develop a world-class level of mental toughness according to Siebold?

It begins with passion. If you are going to succeed at anything, you have to develop a vision and a burning desire to see that vision through whatever adversity may come your way. Let's put it this way. If on a scale of 1 to 10 your passion is a five and you encounter a problem that is an eight, you're not going to overcome it. It's going to take you down. If on the other hand, you are an eight and your problem is a five or even a seven, you'll find a way to overcome. See what I mean? What that means is your passion needs to be a 10+. That way you'll find a way to run through walls to achieve your dreams. Using Carlstedt's Protocol, that doesn't mean you need to walk through life psyched up. What that does mean is as long as you take your preparation to a world-class level, when it comes time to perform you'll have the necessary confidence to perform in the zone.

What happens if your passion is not a 10? You have a problem. In my opinion, you probably need a different passion. Let's give the example of network marketing. The network marketing industry presents a unique opportunity for people to develop a side income and develop it into whatever they can. It is not uncommon for some network marketers to make \$50,000 to \$100,000 a month! The challenge is to overcome a tremendous amount of rejection. Most people are not prepared for that kind of rejection. The network marketing industry presents the opportunity for financial independence, but if people are going to get involved strictly for the money, when the going gets tough most are going to fold the tent. That's why so few people succeed in that industry. It's not for everybody.

But if you do have that passion, whatever it is, you'll develop the staying power to see it through to the end. You have to love what you are doing. If you do love what you are doing, other people will pick up on that and be naturally attracted to you. Who wants to do business with someone who is not passionate about their product or service?

Part of being mentally tough is doing things when we really don't feel like it. A corollary to that is doing things we are afraid of. If we are afraid of something, naturally we don't feel like doing that activity, right?

Let's say you are trying to start a side business but you have to work a full-time job to pay the bills. Let's say you work a 40-hour week and get home from the office at 7 p.m. You have dinner for a half hour and you have an hour to two hours five nights a week plus Saturday to build your business. The truth is you work really hard all day and while you are passionate about your dream, some days you are just too tired and would rather roll up on the couch and watch sports. Let's say you can put an extra 12 hours a week into this venture and you estimate it will take a year to get it off the ground. That means you will have to invest 624 hours to get this business off the ground in the next year. We all have the same 168 hours in a week. If you are consistent and invest that 12 hours every week you'll be where you need to be in 52 weeks. But let's say you get lazy and invest only four hours a week. That's one third of the time and it will take you three years to get your business off the ground. Can you begin to appreciate the value of your time that you never get back and how concentrated effort adds up over the long haul? The mentally tough get it.

Let's apply this to true mastery. According to the *Cambridge Handbook of Expertise and Expert Performance*, mastery in any walk of life is due to practice, motivation, and the right environment. Sure, we all have a proclivity to do something, but it's what we do with this proclivity is what counts. Stop thinking you can't be great at something because you're not a born genius.

## ■ 10,000 Hours

Anders Ericsson is a professor of psychology at Florida State University as well as one of the Cambridge authors. His study of mastery suggests that extended deliberate practice is the key. One particular study was done with 78 German pianists and violinists. He interviewed them extensively and came to the conclusion the best of the group had spent an estimated 10,000 hours practicing compared to 5,000 hours for the group considered mediocre or average.

One of the reasons for mastery, according to the Cambridge study, is the brain's ability to chunk information. When we learn new skills, the brain develops new neuro pathways. In simple terms, these new neuro nets group new information together which is easily remembered in the future. In this way, the brain has a greater information bank to draw from. This has also been confirmed by the work of Dr. Joe Dispenza of "What the Bleep Do We Know" fame. That way, a person can spend a greater amount of time

discerning shades of gray. Using the sports analogy, we know there isn't much of a difference between the best and worst teams. The best teams are only a few percentage points better in the fundamentals of whatever game we are talking about. But this is the big difference between being good or great at any particular endeavor. Greatness comes over time as we learn sound methodologies and build upon them to discern subtle ways of improvement.

A college degree is the equivalent of 120 credits of study. Since each class gives you three credits and on average it takes about 45 hours (15 weeks a semester multiplied by 3 hours) to get through a class. It takes 40 classes to get a college degree. A college degree takes 1,800 of classroom hours to accomplish. Of course, this doesn't include the hours of study that go into earning each credit. Let's say it takes an additional two hours of study (including cramming for final exams) for each class. Let's consider it takes an additional 90 hours of study for each class. That increases the time by 3,600 hours to get that degree. When we add 3,600 to 1,800 we come up with 5,400 hours. This confirms what Ericsson uncovered, because at 5,000 hours who comes out of college at the mastery level?

Let's go back to the side business we discussed earlier. If you put that same two extra hours a day/twelve hours a week into improving your life, after a year that will be 624 hours. This may be enough to get your business off the ground but not enough to really prosper. After three years you will have the equivalent of enough classroom time logged to earn a degree. By that time, you may have established that it could succeed. But the Cambridge study suggests a 10-year rule for anyone to achieve greatness. Since this is a book about trading, obviously no college degree is required. But those people who suggest all you need to do is attend a weekend seminar or buy a particular software program to gain mastery are misleading the public.

So wherever you are in the mastery continuum at the present time, I want you to have some guideposts so you can determine exactly where you are at this point in time. We've also discussed the distractions that rob you of your chance at mastery. The material in this book will go a long way toward giving you the tools to allow your brain to chunk and move you in the right direction.

Let's equate this example to trading. There is no doubt about this. Mastering financial markets takes quite a bit of time and energy. I'm talking about time and energy during trading hours but after trading hours as well. If you like to trade stocks you'll have to spend an hour to two hours every night studying charts looking for the right setups. If you don't put the time

in, you'll always count on someone else to tell you what to buy and when to buy it. A well-known technician scans thousands of stocks every single day. This world-class level of preparation keeps him updated on the markets and determines which stocks to buy as well. Personally, I have to study the cycles on the indices every single day to know what is going on.

People who are just starting out are going to have to pick a methodology and learn it from top to bottom. Whether it is this one or any one, you'll have to come to a place where you trust your indicators 100 percent. When it comes time to pull the trigger, there is no time to think about it. You either do or you don't.

As you go through your trading learning curve, mental toughness really becomes your most important characteristic. It's easy to pull the trigger when things are going well and you've been on a winning streak. What happens when you've been stopped out three or four times in a row? It is basic human nature to be a bit apprehensive after a losing streak. However, Douglas teaches us we must use each opportunity in the market as a unique point in time that has no relationship to what happened before.

Let's say your favorite chart now has a bearish MACD divergence and the fifth wave is approaching the 60-62 bar time window. On bar 63 we get a black candle bearish engulfing bar. What is happening right now has nothing to do with what happened yesterday, last week, or last month. You know the market doesn't even know you exist but here lies a unique opportunity in time to pull the trigger on a profitable trade. Let's apply this same analogy to sports.

A relief pitcher like Billy Wagner gets paid \$10 million a year to come in in the ninth inning and close out the game and he can't think or worry about the possibility of failure. He has to view each pitch as an opportunity to be the hero. How does he do this? First of all by being passionate about his job but then practicing perfectly. When he comes into the game, all of the preparation is done. Carlstedt would say he has a high hypnotic susceptibility with the ability to clear out the clutter. When Wagner blows a save he is always asked how he will deal with it the next game. Invariably he always says he has to forget it and move on. As traders, we need to be able to do the same thing.

John Elway has one of the best records in the history of football for late fourth quarter comebacks. Do you think he worried about failure? Do you think he worried about throwing an interception that would lose the game? Did he occasionally lose a game? Yes he did, but he wasn't consumed by it and just moved on. He knew that his overall track record was very high and nobody wins them all. Same thing goes for Joe Montana, Michael Jordan,

and Mark Messier for that matter. You can't ever be at your best while letting the possibility of failure consume you. This is what makes the great ones great. While Carlstedt may not have had the opportunity to study all of the great clutch performers, I believe there is an excellent chance they would have produced similar results to the clutch performers he did study.

It's the same philosophy when it comes to trading. You are going to get stopped out and maybe get stopped out several times in a row. The market doesn't know that or care. So if you are not mentally prepared to take advantage of the unique opportunity sitting before you in the present, perhaps you need to check your mental toughness quotient. So how do you deal with losses?

Losses are part of the game, we all know that. As long as we always use stops and never allow ourselves to get buried, we'll be fine. We should always have the stop point in place before we enter a trade. Many traders put their ego and emotional capital in every trade. When it doesn't work out they take it personally as if the market performed a personal attack on them. If the market doesn't even know we exist, how can that be?

Douglas suggests we treat trading as if we were the casino. We need to look at trading like we are the house. Did you ever notice those disclaimers in the casinos that tell us the slot machines have a 97.4 percent payback? Do you know what that means? Most of you do know, but for every dollar you put in (statistically) in pays out 97.4 cents. You then put back that 97.4 cents back in the machine and it returns you 90 cents. This process continues until the one arm bandit has your whole dollar. In other words, the casino knows they are going to lose. In fact, they hope to lose as it attracts more players. Every so often someone has to win a million dollars or nobody would be interested. They don't know when it's going to happen, but what they do know is they win in the long run.

As traders we can't get overly concerned about any one given trade or even a bunch. What we need to do, according to Douglas, is measure our progress in groups of 20. What that means is we take inventory after 20. In that way, we can observe our performance over time. We get to see the good, the bad, and the ugly. If a pattern develops that is detrimental to our progress or profitability we make adjustments along the way. Then we look to get better over the next 20 trades. In this way, we not only get to fix what's wrong, but we don't fall into the trap of fear and loathing as we give up the need to be right every single time. Over time, we adjust and improve until such time our numbers get into the long run statistically. It is at that time we begin to operate just like a casino (189-201).

By the way, after you've lost four or five in a row, do you really feel like pulling the trigger? But you'll do it anyway. Right?

Thus far we've covered topics like practice, preparation, good habits, passion, perseverance, and discipline. These characteristics apply to every walk of life. But being mentally tough also means accepting responsibility for oneself. This means not blaming the market, broker, software, the guy on TV, or any other person for your performance. If you pulled the trigger and it didn't work, you need to accept responsibility.

Accepting responsibility for your own actions is a major step in the maturity process. Becoming a mature person is an important prerequisite to success in any walk of life. When you accept responsibility you go a long way toward controlling your own destiny. I know this sounds elementary, but take a look around our society. We happen to live in a time where we are taught to blame others for our plight. When times get tough we expect the government to bail us out of our difficulties. I'm sorry, but there is no such thing. Karl Marx started this little communism experiment about 150 years ago where the idea was for the government to take responsibility for all of its citizens. The government was supposed to provide homes and jobs for all of its citizens. The Russians tried it only to see their wall collapse. The Chinese tried it only to embrace capitalism after those brave young college students stood down the Chinese army.

The government may be able to help you in a time of emergency but generally speaking, they aren't doing a damn thing for your life. If you aspire to more than welfare and social security, its best to take responsibility for your life no matter what happens to you. Nobody is responsible for what happens in life except you. If you are in poor health, have high credit card debt, or lost a job, in the end you are responsible. If you come to realize that you created this reality you've just taken a major step in overcoming these obstacles. If you accept responsibility for your own success you'll come to see how capable you are of accomplishing even more.

This is Mental Toughness 101. You now have an understanding that you need to choose the right vehicle for your life in order to persevere through every imaginable obstacle. By being honest with yourself, believing in yourself, and not deflecting blame you can stay on track through some tough times. Without these attributes, you have no chance. With these attributes, you may still have more mental garbage to clean up. Why? Because life happens and we need tools to overcome many of the obstacles mentioned earlier in the chapter.

Not only do we have to deal with the adversities life throws at us that have been discussed earlier in the chapter, but we also have to deal with our own DNA. What do I mean by that? Our brains have been wired to conform to others. Getting back to the psychology of the crowd, the reason it's so difficult for us to go against the crowd is our brains have been wired for survival. The urge to conform seems to be wired as unconscious herding behavior. It's part of our self-preservation instinct. Numbers of studies have been done on this topic, but the bottom line is our brain stem controls impulses essential to survival, the limbic system controls emotions, and the neocortex controls reason (Maclean, Prechter). Our brain stem controls functions of instinct such as security, fear, pleasure, breeding, hoarding, and herding (Maclean, Prechter). The limbic system guides our emotions that control behavior for self-preservation. According to Maclean the limbic system is faster than the neocortex (reason) and also regulates the degree of emotions. This could be why our emotions tend to get the best of us many times.

Since we all have the unconscious urge to be liked, to belong, to dress the same as our peers, we also have that urge to do the same thing as the rest of the participants in financial markets. Many times, that will lead to financial suicide. This is why people from other successful walks of life such as doctors, lawyers, and business people fail miserably at trading or investing. The other issue as Carlstedt proved is the intelligence factor. You would agree that doctors and lawyers are some of the most intelligent people in society. However, their intelligence does not prepare them to deal with the pressure of not conforming to the crowd. They've been taught there is a certain way to conduct business, a certain way to dress. That being said, they are not prepared to take trades when it seems to be scary to do so. Many will come to trading, find a trend, and pile on. They do this because it feels comfortable. Well, if it feels comfortable, it's probably wrong. No wonder so many people buy tops and sell bottoms.

One of my early mentors was Bill Williams who wrote *Trading Chaos* and *New Trading Dimensions*. He discusses a phenomenon called Joe Gremlin. According to Williams, Joe Gremlin is always sitting on our shoulder waiting to sabotage us. He is that little voice that says you are not good enough, smart enough, rich enough, or good looking enough to deserve success. He'll find a way to sabotage you into passing up the right setups and getting into the wrong ones. Why is Joe Gremlin there? Most of us have been affected by the factors listed in the early part of this chapter. For one thing, we have that conformity issue to overcome. Joe Gremlin is that critical voice inside your head designed to keep you out of trouble. He is your

parent that told you to keep your finger off the hot stove. He is also there to tell you to put the parachute on if you are going to jump out of an airplane. That is if you are able to get past that little voice which is warning you not to do it at all. Joe Gremlin is there to be sure you avoid risks.

When it comes to financial markets, the biggest apparent risk is going short after a huge rally and the folks on television are getting out the party hats. Likewise, it's also when one particularly well-known stock market personality finally told us it's safe to short stocks on October 10, 2002. That little voice is going to tell you not to do it. This process repeats itself on every chart in every time frame every single day. You need to be able to make peace with your gremlin. According to Carlstedt, if you have a high degree of hypnotic susceptibility you'll get in a zone. Based on this logic you will be able to put Mr. Gremlin in his place.

Assuming you can tame that gremlin, there are still those 10 factors listed above. I'm here to tell you that if you are in a life crisis, you probably shouldn't be trading. Not in the short term. If you need help, by all means get it. I have an old acquaintance whose wife was dying from breast cancer late in the NASDAQ bubble period. This individual went short the NASDAQ futures contract in fall of 1999 when tech just began its historic rise from 2000 to 5000. You heard right, this individual was short. Obviously, he wasn't the greatest trader to begin with, but on an unconscious basis he went into a supreme case of denial concerning his position and as the losses mounted he refused to turn on the computer. Obviously, this individual was going through the loss of a spouse and quite possibly was losing the money as a way of self-punishment. Why? Maybe he felt he was responsible for his wife's condition. Maybe he felt survivor guilt. Whatever the case, this individual lost nearly \$190,000 at a time when others were making once-in-a-lifetime fortunes.

Hopefully, most problems we deal with from one day to the next are not going to be at such a gargantuan level. Of course, we do carry the baggage from our experiences.

To be sure, some are easier to overcome than others. For the ones that are easier to overcome, Williams suggests an exercise you are to do every morning upon arising. Well, first you go to the bathroom, but after that you get out a notebook and write three pages.

Why do you write? Williams takes us through a process where we have to become more aware. Being aware means living in the present tense. Most of us don't spend nearly enough time in the present. Obviously, if we are affected by those 10 items, we are unconsciously living in some past. Are we

thinking about the death of a spouse or a parent? Are we thinking about that job opportunity we lost six months ago? Are we thinking about a girlfriend that may have just left? Worse, do we go around plotting revenge?

Not only do we think about the past, but we also project into the future. For many of us, that means having an expectation that the future results are going to turn out the way the past did. If we've always lost money at trading, we will continue to do so. Why? Simply put, that's all we know and the devil we know is often times preferable to the devil we don't. Some people have an expectation of winning, many don't. The point is many of us spend way too much time rehashing old events or worrying about things that haven't come to pass and may never come to pass.

What we want to do is learn to live in the present. The present is all we have. Life is just one long series of present moments and to the degree we stay in the moment, will be the degree that we give ourselves a chance to succeed. Check out this statement:

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### Opportunity Is Nowhere

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You can look at the following statement in two ways. You may have seen this exercise before.

OPPORTUNITY IS NOWHERE

OPPORTUNITY IS NOW HERE

Williams tells us that if we saw the first statement we are making a projection about the past or the future. It is judgment based on our environment or experiences in life. If you saw the second statement, you are living in the moment. The important thing to realize about life as well as financial markets is this moment is unique and unlike any that has come before it or will come after it. It will never happen again. The rich and poor alike all have 168 hours in every week. All we have is time. What matters is what we do with this time. Some of us think our time is worth \$7 per hour, others \$50 per hour, and others value their time at \$1,000. How can you increase your value? Learning how financial markets really work is one good way to do it. Let's just say that if you are trading the NASDAQ futures contract at \$100 per point you can accumulate funds really quickly.

The point about financial markets is they are a mechanism of Chaos theory. According to Chaos theory or the Wave Principle, patterns may repeat over and over with similar tendencies, but no two patterns are ever exactly the same. What that means is each pattern we encounter on a price chart offers us a unique ability to make a profit that will never happen again. The best

part is we have no idea what will happen. We think we know what is going to happen, but how many times has a move in any time frame gone much further than we ever thought possible? We were expecting a five-point move that turned into 15. We expected an eight-day rally that turned into 21 days. We may have expected a 55-day rally that turned into a move that lasted two years. These things happen all of the time. The point is we have to approach each situation as unique, live in the moment, and never prejudge a situation.

How many of you have ever heard of Leonard Orr? Leonard Orr was an abundance trainer/guru in the 1970s before anyone heard of Tony Robbins. His mantra was we don't have the luxury of a negative thought. He taught his students to record every single thought they had upon arising in the morning and they were not to leave the house until they could get rid of their negative thoughts. Since most of his students had regular jobs I'm sure you can appreciate how expensive this exercise could become. If his students didn't expunge those negative thoughts, Orr believed they were unfit to make a contribution to their jobs. His students either shaped up or shipped out very quickly.

## ■ **Surgery on Self**

What we want to do is start releasing the past and live in the present. There are various methods to do that, but writing those three pages is a good start.

What do you write about? Anything, everything, nothing, it really doesn't matter.

You write whatever comes to mind. What you'll find if you do this exercise is that you'll clear much of the mental garbage in your brain that is floating at the surface. By writing three pages you will take on Joe Gremlin straight on and maybe for the first time understand why he is sabotaging you. By writing those pages you may find that you are not comfortable with the trading platform, the software, the broker, the current trend, or whatever the situation is. Joe Gremlin might admit you don't deserve to be successful because of something your eighth-grade teacher told you. Isn't it ridiculous? When you finally deal with that particular issue, the voice of sabotage starts to go away. That gremlin may also reveal to you a particular defeating pattern that you'll be able to overcome.

What if you can't think of anything to write? Write that. Start by saying I can't think of anything to write. Just by starting, things will come to you and you'll fill up three pages very quickly. You'll be surprised what will come

up. This also happens to be an inexpensive form of psychotherapy without wasting years on the couch. What happens in therapy anyway? All you do is sit on the couch and talk while the doctor takes notes. You solve most of your own problems anyway. Sometimes all you need is an outlet for your less-productive ideas and they go away.

What happens when you begin to write is the mental garbage sitting just below the surface rises to the top. Most of us think out of sight means out of mind. Nothing could be further from the truth. As I've stated throughout this chapter we are deeply influenced by our environment and experiences to such a degree many of us aren't even aware of it anymore. We need a mechanism for getting the crap up to the surface and out where it can't cause us any trouble. Writing those pages is an excellent way to do it. As Williams states, what we need to do in order to overcome our gremlin is simply become aware. When you are writing you are aware of every single thought you have. It is good way to monitor your thoughts because what you'll find since you are not being graded on your own literature is you'll write rambling prose which turns out to be one thought after another.

You'll write about what is bothering you, what is working for you. I'm not saying you can't have negative thoughts, you will. What will happen is you'll allow them to rise to the surface. Once they rise to the surface they go away. That's the point. The more crap you can eliminate on a regular basis, the better off you are. What you'll also find is you'll have running conversations with your gremlin and it will actually tell you what it needs from you to go away.

Let's say your gremlin is telling you not to go short after a long rally phase. You'll tell it that you will wait for the right number of bars to elapse and only do so when there is a negative bearish divergence in the MACD. See, prior to reading this book you may have been in a position where you always go short prematurely and Joe Gremlin is really only trying to protect you. Now you have new information by virtue of reading this book and have just built a case for your inner voice that it is safe. You'll have a new paradigm to act on as opposed to not acting. When you allow that particular conflict to come to the surface, it will cease to be a problem. When the situation actually presents itself in real time, you won't have to think, you will just get into the process. It's not that hard to increase your hypnotic susceptibility when you know what to do. When you get into the process, you can get yourself into a flow state. See how that works?

Writing three pages isn't the only method, but it is one that allows you to act in the event you aren't dealing with major issues in your life.

If you are, I recommend different methodologies. These could range from neuro-linguistic programming (NLP), to hypnosis, energy work, or the Sedona Method.

The whole idea behind these methodologies is to change our belief systems. Our emotions are derived from what we believe. What we believe is not necessarily reality. If our beliefs are not aligned with our goals, we are not going to achieve them. It's as simple as that. You may have had to deal with the 10 issues discussed in this chapter and already moved on. More likely you've overcome much of the problems but there could still be lingering layers of garbage you still haven't dealt with.

Think of solving your problems like peeling an onion. An onion has one layer after another until we get to the core. We keep peeling away until there's nothing left. Suppose you married a woman who was similar to your mother. Let's also say that your mom was well meaning but didn't exactly have a prosperity mentality. Let's say your mom told you that you always had to, "save for a rainy day" and "money didn't grow on trees." Your wife was nothing like this but she sure did look a lot like mom. Many people end up marrying people who remind them of their parents, that's a fact. There may be an unconscious association to your mother's poverty mentality when you think of your wife. You may still be tied to that past.

My point here is that we all have some issues that are tied to earlier issues that go unresolved to a certain degree that stand in our way of being successful in the present time. Using this example, let's say you've overcome many of these issues but in the process you gained 50 pounds. You may be psychologically right to trade now, but you have issues dealing with the weight gain such as high blood pressure, potential diabetes, and poor energy levels. As you attempt to lose weight you'll find the reason you eat food is not because you are hungry, but because you do it out of the security you feel for lack in your life. It's the same thing for people who are ruining their health when they pick up that first pack of cigarettes.

NLP is designed to interrupt a negative pattern and install more productive patterns. The theory behind NLP is we become anchored into certain beliefs because they remind us of other beliefs. That's why certain emotions come to the surface when you think of certain people. That's also how advertising works. Think of that little gecko on television and you come up with Geico car insurance. People eat things in excess that are not good for them like pizza or chocolate because they come to associate the feelings of security they get in times of a life crisis. How do you break that pattern?

According to NLP, a practitioner will install a program where every time you think of chocolate or pizza you will associate it with rotten eggs or dog feces. Then they will install new beliefs and patterns of a person who behaves in a healthy manner. NLP can be used for just about any bad habit, any fear or phobia, or to change belief systems about money. It can even change your belief systems about trading. Let's say you are part of the 90 percent that lost all of their profits from the 1990s bull in the bear market to 2002. Many of these individuals walk around with scars from that period. Many of those people quit the stock market forever. NLP can interrupt the belief systems that were installed during that time that such individuals have that they can only lose money in the stock market (Robbins 83-165).

It's very unfortunate, but a whole generation of people grew up believing financial markets only go up because their only experience with stocks was from the late 1990s. Once these beliefs were installed they were ill prepared for the fact the NASDAQ gave back 80 percent of those gains in a little over two years.

Hypnosis may also be an avenue because the methodology works on our unconscious mind. A practitioner will put us into an alpha state of deep relaxation where our subconscious mind is most receptive to new ideas. See, our mind doesn't know the difference between fact and fiction. It will believe anything we tell it or program it to believe. Hypnosis can be used for the same things as NLP. It can be used to change bad habits such as smoking, drinking, eating, gambling, and drug abuse. It can even be used to change our self-image. The result becomes weight loss, greater happiness, and health as well as a more abundant mindset.

In the first edition I discussed one of my favorite programs, which was the Sedona Method. As I discuss below it got me through one of the most difficult periods in my life up to that time. I recommend you read the book, which was on the *New York Times* bestseller list. However, it was inspired by Lester Levenson, a physicist and successful businessman. At age 42 he had many serious health problems including two coronaries. According to the book, his doctors sent him home to die. This was in 1952. Mr. Levenson didn't give up. What he discovered as the key to his recovery was a process of releasing or letting go. I'm not going to describe the processes here but Mr. Levenson recovered to live another 42 years in great health.

Basically, the Sedona Method is most compatible with everything we've discussed in this book simply because in order to understand the Wave Principle, Chaos theory, Quantum Physics, or Lucas Waves we must go through a process of letting go and living in the present moment. In order

for us to succeed in financial markets, we must leave check our old, limiting beliefs at the door.

When you learn the Sedona Method you come to realize that all of your limiting beliefs and behaviors are a result of a layer of conditions we may have been brushing under the rug for our entire lives. We learn to peel back that onion and as we release our problems they float to the surface and go away. Like the other methodologies, the Sedona Method can be used for changing bad habits, weight loss, fears, and phobias but most importantly to develop the proper attitudes toward money and success. Personally, around Christmas 2005 when I found a lump in my testicle and naturally had the fear that I may have testicular cancer, the fear of even going to a doctor was so profound I have to admit I never felt a greater fear in my entire life. I credit working with the Sedona Method to release much of that fear so I could even go to the doctor and deal with the issue. I shared the story earlier.

The results were a benign cyst instead with minor surgery to remove it. But I give full credit to the Sedona Method for helping me get through this ordeal because while all of this was going on, I was getting my articles published in important trading magazines for the first time.

No chapter on trading psychology would be complete without a discussion of spirituality. I'm going to be inclusive and include all religions and refer to God. Since this book will be read by people from all over the world each person needs to refer to the God of his understanding. I personally believe that one of the biggest problems traders have is with the ego. Traders are a stubborn lot and just refuse to be wrong. Wall Street also refuses to be wrong and has learned very little from the experiences of 2008. The most important understanding any trader will ever have is the market is so vast he is barely a speck of sand in relation to all the money circulating through the market on any given moment. The market does not care or even know you exist. With that in mind, it's wise to realize a trend can go a lot further than even the best bankrolled hedge fund. In fact, as discussed elsewhere in this edition, the oil hedge fund in London, which was known as one of the largest commodity hedge funds in the world lost \$400 million in the first four days after the oil market peaked in May 2011. That's fine, anyone can lose money but the problem was that in a Reuters story, traders were quoted as stating they didn't "have a clue" as to why it happened.

Did these traders just think oil would go up forever? Did these traders ever consider that at some point the markets would turn? The antidote for ego is humility. Humility and a healthy fear of God go hand in hand.

When you consider that millions of people bought houses they could not afford, which was promoted by regulators who looked the other way who in turn were getting fat from a Wall Street establishment that promoted a culture that could not be sustained all in the name of greed, I'd say one of the biggest problems facing our society is one of humility. Without going off on a tangent, the real estate bubble was facilitated by a belief it would keep going up, so greed ran rampant on every level.

Where does humility come from? People become humble in one of two ways. Life either takes one down a notch or 10 as we've learned in the financial crisis. That's the hard way. The only other way it happens is a healthy respect for God and consequences. The beginning of wisdom is the fear of the Lord, right? There are consequences for everything we do in life. But by having a relationship with the God of our understanding, by disciplining ourselves in every area of our lives, this discipline extends to our life in the market where we develop discipline and obedience to a trading plan which keeps us away from taking trades that are not in our trading plan or making the kind of dumb and devastating mistakes that destroy a bankroll. Unfortunately in the way of the world and basic human psychology they don't discover God until they get in a position where they are on their knees. Many people turn to God only at such time when they lose a job, a marriage, a home, or get a life-threatening illness. It would be a lot easier if one could come to such a relationship without some type of devastating event. Perhaps reading this will stir you to think about it. But the truth of the matter is one must be supremely confident to even attempt to be a trader, but on the other hand one must have a healthy respect for what can happen on a computer screen.

So we walk a fine line from confidence to humility. One can be both just as long as the ego doesn't get the best of us.

I put this chapter in the book because no matter what system you use, it will be of no use to you unless you are able to take control of your mind. You must understand that when it comes to trading, you are competing with yourself. You need to understand why you pulled the trigger and the behavior you exhibit while you are in the trade is more representative of who you really are than just about any other activity you can do. By bringing the proper mindset you are just qualifying yourself to be at the starting gate. This is not a bunch of psychobabble or academic theory. We all have issues that keep us from performing at our best. We need to be able to perform when the pressure is on. Not only do we need to perform, we need to do it in a relaxed state of mind.

The problem for many traders is they have no clue how their beliefs, which have been installed by their environment and life experience, will affect their performance. When it doesn't work out, they just continue playing whatever script they brought to the table. In the long run, they'll blame the market, the broker, the stock picking service, the war in Iraq, or anything other than themselves. Worse, they'll be wrong because everyone needs to accept responsibility for their own actions.

To summarize, we need to understand where we came from and where we are going. If there are life issues to deal with, get the help you need. Go for therapy or counseling if that's appropriate. If you want to try one of the methodologies discussed in this chapter, I hope I've opened your mind into thinking outside of the box. There are many alternatives. Once you are actually prepared to trade you'll have the right mindset to produce the proper mental toughness needed to get through it. Trading is never going to be easy, but it can be simple. Now that you've been mentally equipped to participate, the final chapter is going to tie together some of the higher-probability setups so you can start using this wonderful methodology.

# Market Psychology/ Sentiment

Now that we've discussed you, let's talk about the market. Back in the Internet bear era, like a lot of people, I believed markets could've gone a lot lower in a move that would continue to drop until the Dow hit 1000. So we are going to talk about bull and bear markets. We are going to talk about fear, greed, and the emotions that fuel these markets. I learned a lot from that 2002 bottom. It was an expensive lesson but it may have been the best thing that ever happened to me.

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Here's another tidbit, the only reason I'm really here today is my appreciation of market psychology. Back in the early part of 2003, it was probably January or February I was a caller to a financial news program in Phoenix, Arizona. I've told this story a lot and the reason I do is there's an important lesson attached to it. As it turns out, one of the hosts of that show was very bullish all the way down. At 10 percent down he said it was just a pullback. At 20 percent he said it was an interesting correction and stocks were starting to go on sale. If prices would just get a little lower, they could be the steal of the century. At 30 percent, stocks were a steal. Well, by the time they were close to 50 percent I was on the horn.

There are certain moments in a person's life that change our destiny. I'm a perfect example of it. So when I got on the air, I told the hosts I knew when the market was going to bottom. Since nobody knows when the bottom will

really hit, I got everyone's attention. Perhaps it was just to humor me and get a laugh as radio is also entertainment but I was serious. They were listening. At the very least I think they thought I was about to make a gigantic fool out of myself.

So, you know when the market is going to bottom? That's right! Okay let's hear it. There were two hosts to this show and I don't really want to mention any names so let's just call them Bob and Jim (not the real names).

"The market is going to bottom when Jim turns bearish!" There was a noticeable silence on the other end of the phone for a couple of seconds. Then Bob cut in and said, "You know what, he's right! Jim, you've been bullish the whole way down!" I could just see Jim's face turn red right through the phone. He stuttered and defended himself but was an incredible standup guy. They told me to hold on after the call was over and I was told that Jim invited me to be on as his guest the following week where I would debate him on the merits of technical analysis. He didn't have to do it. Who knows where I'd be if he hadn't. But the next week I made my debut on the radio and started the freebie newsletter which led to building a following at the Stockcharts.com public list page, which led to getting published in Australia, which led to my debut in *Futures* magazine, which led to a real publishing contract.

I'm not repeating this story to impress you, but to impress upon you how overlooked but important it is to have a keen understanding of human psychology when it comes to financial markets. There was another very well-known television personality who was also bullish all the way down and by the time we hit October 9, 2002, this person was telling viewers it was finally safe to short stocks. My friends, that proclamation came within hours of the actual bottom and end of the bear market.

You've heard it many times. Bull markets climb a wall of worry but bear markets ride down a slope of hope. Yes, we know that intellectually, but it's hard to spot when it is happening in real time. That is the point of this chapter. Think about any business cycle. It starts out in absolute despair but for some reason things don't seem to get worse. At the beginning of new bull markets, the bar is set so low that markets will go up on poor news because there aren't any expectations. Markets suddenly don't go down on the kind of news that only six months prior would be a major selloff. At some point people realize the sky is no longer falling and you hear stories about emboldened entrepreneurs who decided bad economic times were the right time to start a business because there wasn't much competition. Or a new trend gets under way. Take 2003 for instance, the Fed created an

incentive to get the economy rolling by coming up with low rates and easy money. They made it incredibly easy to get people into homes. That started the housing boom. As nothing stood in the way of progress, more people got involved until relative prosperity came back. As the business cycle matures, so do people's expectations. In the case of real estate, houses were going up in price and people came to the erroneous conclusion they'd continue going up. At the start of the business cycle, people are always fighting the last war. They are overly pessimistic at the bottom and certainly too optimistic at the top. By the time we get near the top people base their business outlook on the economy continuing to do the same thing well into the future. That's why so many ill-conceived businesses, business plans, and ideas go belly up. It's also a time for those who had been skirting the law to end up without any clothes. Had the economy kept going, Bernie never would have been caught. As we know, there were plenty of mini-Madoffs to go around.

## ■ Important Turning Points

Okay, it's now the summer of 2007 and we know that the Russell 2000, in Figure 14.1, peaked in July. I live in Phoenix, which was one of the epicenters of the financial earthquake. Around the time the Russell topped, real estate people in this town started noticing a serious slowdown in business. Fewer deals went into escrow and the ones that did tended to start



**FIGURE 14.1** Russell 2000 Top

falling out. Business had slowed down. You'll remember the July peak, scary selloff into August, and a final rally leg into October where the market topped right in our 262-week window to 2002. I've shown you this chart earlier with its own set of interesting calculations. After the top we started hearing lots of talk about the business slowdown and the potential for a soft landing. We also heard for the first time there might be a problem with a subprime mess but everyone up to Bernanke told the public the mess would be contained.

Why didn't they just come clean with the problem? There are several reasons. One of which is the markets and the banking system are built on confidence. If we don't have confidence in our banks, we'll all try to take our money out at the same time and that wouldn't be good. Ever the best student of the Great Depression, Bernanke knew full well to put on a positive spin. But there's a bigger reason. After five years of a bull market in an economy that created a euphoric housing bubble, it was beyond the capacity of the human mind to conceive of a major shift in the wind. Human beings have a very hard time conceiving the inconceivable. It's the reason genocide can happen. Unfortunately the victims can't conceive they could all be killed. It's the reason most economists get it wrong most of the time. The bottom line is economists usually project the next 12 months the same way the prior 12 months went down.

So it is normal and customary to think that after a prolonged period of economic expansion that it will just keep going or whatever roadblock that appears to be in the way is only temporary. So the holiday season of 2007 was filled with anticipation of a soft landing because the subprime mess would be contained. But business didn't really pick up and real estate people sensed that this time something was indeed different. News stories broke in early 2008 that there would be millions of resets where the short-term interest-only loans millions capitalized on to get into those homes they couldn't afford would expire, and to keep those homes people would have to engage in principal and interest type loans they could not afford. Once that started happening the banking sector took a big hit and was actually 73 weeks off its high by the time in July 2008 Ben Bernanke went to the Senate Banking committee. There was also a key 2.618 Fibonacci extension as well as a 144-week move off the origin of the last leg up to the high within a day or two of that fateful meeting, shown in Figure 14.2. Our *Short Term Update* was brand new at that time and I remember not only bringing it to our client's attention but wrote about it on the Futuresmag.com web site as well.



**FIGURE 14.2** BKX before Financial Crisis

In case you don't remember it, you can Google the event but it was the point in time Congress realized something more serious was going on and it was actually the first time they held Helicopter Ben's feet to the fire. A 10-week rally ensued, but that was also when they instituted a ban on naked short sales of financial stocks. It was the point of recognition. We know what followed. First there was Lehman, then AIG, TARP, and the banking system came to the edge and the government had to backstop the entire system in a way they failed to do in 1929. You remember the feeling; I remember the feeling. There were days where it felt like the financial system would seize up and we'd wake up one morning and our debit cards wouldn't work anymore. I don't really have to tell you what the bottom feels like. I believe this generation will be scarred by it the same way those who lived in the Great Depression were.

But it's important to take note of what came out of it. Certainly, there was no more talk of soft landings. But we went through a process where markets stopped going down even though the economic news wasn't good. Poor economic news that is followed up by rallies means the markets are climbing a wall of worry. As I said earlier, intellectually we all know that. But as market participants we are generally too close to the forest to see the trees.

Every person that comes into our training program is asked if they watch the business media shows while they are trading. Most people say no. You can do what you like, but I think it's a big mistake if you don't. I used to get very

angry at the incompetence expressed on television. Why aren't they telling us the truth? The economy stinks, why are they talking about a soft landing? If they are wrong, what's the point?

There's a huge point. I bring up CNBC for a reason. When Mark Haines passed away, they spent a whole week memorializing him, as they should have. Back in the prior bear market during one of the terrible selling phases Haines showed up on the set with a Red Cross crash helmet. The program manager was furious and wanted the helmet removed. But I believe it was Jack Welch (head of GE and NBC) who loved it, told Haines he could do anything he wanted, and the helmet stayed. It was Mark Haines who created the CNBC brand of informing and entertaining the viewer in a mostly non-political way. As it turned out, Maria Bartiromo became the first reporter to work the floor of the exchange and since that time the journalists have been the viewer's connection to the mood on the floor of the exchange. A close second would be Bloomberg, but they are somewhat conservative in their approach and FOX Business is now good, too, as they seem to have adopted a more entertaining market-driven style. These networks have the unique ability to pick up the sentiment on the floor. Not only that, their reporting is a mirror of the bias for that particular day. There are days when the sentiment is so thick you shouldn't think of going long. On days where they report great news out of Europe, for instance, it's not a good day to go short. If you don't turn on the tube for at least a portion of the day you'll miss gaining a good edge.

So after the bottom, markets started climbing a wall of worry since we weren't sure the bottom was in place and social mood was concerned about a retest. Most of the way up, many guests of these shows were asked if there would be a double-dip recession. Do you think there will be a double-dip recession? This question was asked over and over for weeks on end. Yet the market continued higher. The market was climbing a classic wall of worry.

Is there a way not to think like the crowd? Yes, if you understand pattern recognition at a deep level, you would know that one of Gann's most important discoveries was uncovered at the bottom in March 2009. When I uncovered it I developed the confidence to know the bear market bottom was more important and longer lasting than most people realized.

But in 2011 the markets finally hit a peak. They were no longer asking whether there would be a double dip, at first they discussed the new soft patch in the recovery. I don't know about you, but the soft patch discussion of 2011 sounded remarkably similar to the soft landing talk of late 2007 and this equivalent market sentiment appeared in similar places on the chart.

Both discussions materialized in the initial phases off the top. Around the same time, there was talk coming out of China that they would also prevent a hard landing in their economy. They also said they could contain inflation. Doesn't it sound remarkably like Bernanke containing the subprime mess?

At the time I told clients that talk of a soft patch sounded remarkably like late 2007 and the charts were likely in the early phase of a new correction or bear phase. That view won out as the summer progressed when we hit the next psychological phenomenon, the Black Swan. A whole book was written on this subject by Nassim Taleb, so we'll only touch the dictionary definition here. A black swan is an event that goes beyond what is normally expected and is extremely difficult to predict. Remember, the human mind has a hard time conceiving the inconceivable. In the case of the debt ceiling crisis, rational and intelligent people—even the smartest guys in the room—had a hard time believing responsible adult leaders would advocate the U.S. government defaulting on its debt obligations when it was possible to prevent it. Well, they didn't default, but the negotiation created so much damage as to alter the confidence of the public and investors around the world in the ability of the United States to follow through and lead us to the next phase of the recovery.

Likewise, the autumn of 2011 was seen as a time where there was a high-probability belief that Europe would not be able to work its way out of its own Lehman moment. There's a huge difference in 2008 and 2011. First of all, we are all still scarred by the events of 2008. Europe's problems are no longer a surprise, consequently it is not a black swan type of event. If we aren't being taken by surprise, chances are there will not be a panic.

In the course of 2011 we've seen some pretty dramatic stock market bottoms. Who can ever forget the March 2011 earthquake, tsunami, nuclear meltdown bottom? I can remember watching CNN and the reports out of Japan. I literally had tears in my eyes watching television. The fear was real. Those of us in the United States even feared nuclear fallout reaching the shores of the United States. But there was something else at work. By the middle of March, we had reached the seasonal change point of the Gann Master Timing Window at March 21.

This chart, in Figure 14.3, also showed you that the Nikkei was also 233 days off its April 2010 high and had a very good chance of holding. So it truly was a case of the technicals marrying the sentiment. The next important turn came at the May high just a few weeks later as markets once again tested the top end of the range. As it turned out as April turned to May the story broke that Osama Bin Laden had been killed. Jubilation broke out in

Times Square as well as on Pennsylvania Avenue. It had a New Year's Eve kind of feel to it. Media types were expecting the stock market to rally big, because without Mr. Bin Laden, we wouldn't have to put so many resources into the war on terror anymore. As you can imagine they got it wrong. Instead the market topped. Are you surprised?

The next major turn came in August, just as the markets were hitting their 610-day trading windows to the 2009 bottom. The way I remember it we hit the low on Monday, August 8, which was the six hundred and eleventh day of the move off the March 9 bottom. On Tuesday the Dow at one point was up 247 points off the bottom. From 11052 it dropped to 10605 within a couple of hours. At this point we had sold off since the end of July. Everyday fear built up, but the market kept dropping. Why was Tuesday, August 9, different? In my work, the low established on Monday was the back end of a very important timing window. On Tuesday the market was up off the low and it looked like we finally had a bottom. Then the gains evaporated as the Dow dropped a jaw-dropping 447 points! At that point it felt like the time window would be invalidated and there was no end to the selling.

That's the key point. Markets won't turn when fear levels rise. Markets turn when they get to the point when it feels like they'll go down forever. Do you get the difference? So two of the bottoms in 2011 materialized when it felt like they would fall forever and it also felt like the sky was falling or civilization was coming to an end. Just when you thought we were done forever, the Dow turned around just as miraculously and rose 638 points



**FIGURE 14.3** Nikkei Post Tsunami

to put in the bottom shown in Figure 14.4. Sentiment got really bad again in early October and that time the early stages of the rally were greeted by grim warnings of recession and worse. One article, published in the *New York Times*, on October 10 even suggested that the Great Depression was the good old days and described how the United States was better off in the Great Depression than it is in 2011. Wow! It took them only three years to come up with that view. It was a grim article, but as grim as that article was, I saw the silver lining and told my wife articles like that have to mean we are much closer to the end than the beginning. All of which brings us to our key point of bull and bear markets.

Analysts can have all kinds of ideas of how long they think a bear market is going to last. We even have some projections that the Dow will get down to 400. If you believe that, you shouldn't trade because you'll lose a lot of money. The truth of the matter is bear markets will end when sentiment gets to the point where it feels like there is no end in sight. Remember the 1970s? Stocks had not rallied in years and nobody thought there was the possibility that they would. It was the same thing with gold by the turn of the century. Gold was down for 20 years and nobody believed in the possibility of a rally. By the late 1970s it got to the point where Wall Street firms were actually discouraging college graduates from a career in brokerage. As we know, the exact opposite condition existed by 2000 and certainly again by the next top in 2007. I always wondered, what could possibly make the public dislike stocks again?



**FIGURE 14.4** Debt Ceiling Crisis

Enter Bernie Madoff. After Madoff, I think people had it. They threw in the towel. I remember going to the New York Traders Expo in February 2009 and never saw New York City on its knees the way it was at that time. The city is usually exciting and there's always a buzz. But something was missing. I remember having lunch one day down the street from Madison Square Garden at a well-known deli. At the counter there was a television, which still had on CNBC, and there were two men sitting in suits in serious conversation. It just so happened that at the moment I was there the Dow had broken below the 2002 bottom, a very key technical support level. When I brought this to the attention of the two gentlemen sitting at the counter next to me, they looked at me and said, "Who cares!" I was blown away. I never thought I'd see the day where people in Manhattan wouldn't care about the market anymore. I asked them why they felt that way. I got a one-word answer. Madoff!

So nobody really can know when sentiment will reach an extreme. When it happens, it happens. During a bear phase we go from denial, to the point of recognition, to not being able to conceive the inconceivable, to fear building, to the end of the world. We can get there fairly quickly or it can take weeks or months. But we usually do get some emotional extreme when our time windows line up. Your job is to monitor it and be aware of it at all times. It's okay to feel the fear. It's even okay to have tears in your eyes. It's also okay to feel the euphoria on the day they got Bin Laden. But as a trader you have an obligation to yourself and the process at some point to separate yourself from your emotions and realize what it means. That's really what separates the intermediate or amateur from the pro. It's part of the job description.

What makes a bear extend? There will be a lot of days where the market can be down, as a routine, several hundred points and people are either numb to it or treat it as business as usual. If you are wondering if a selloff is going to continue, just turn on CNBC and see how they are reacting that day. If sentiment starts to get thick, it means we are close.

Likewise a bull market works just the opposite. Since it climbs a wall of worry, sentiment tends to get very heavy very quickly. If you noticed, many days during the 2009 to 2011 phase we'd get a pullback that would last a day or two and suddenly the market would fixate on some bad news and move higher. Keep this in mind; sentiment turns bad much more quickly in a bull market than in a bear market. That's the fuel that keeps the bull going. The next thing that keeps the bull going is disbelief. If we have a rally off an important bottom and the market gets to first resistance or higher

and it's met by amazement and disbelief, that means there aren't enough bulls in the market yet. You don't even really need to look at a VIX or sentiment report. But I'm sure you'll find those indicators are supportive of whatever it is you are feeling. The beginning of a bull phase commences on short covering. Short covering is buying, but not the kind of buying that rallies are made of. You have to have buy orders to cover the sell orders in order for bears to take profits, but it's real buying in hopes the market will go higher that gets a market to confirm a technical bottom. Bears provide a very important service to the market. They provide the liquidity that fuels new bull markets. First you have short covering, then short-term players who come in to go long. From there it's the longer-term players who need to be a little cautious in what they do who have to see that the water is at least a little warm before they can act. By the time short covering is complete, the pattern could already be at first resistance and of course you won't believe it. The market has lots of potential to go higher. The more shorts that cover, the higher the market goes, and as it continues even higher there are even fewer sellers, thus propelling markets even higher. As you can see, we haven't even discussed the possibility of the public being involved. We don't get long-term tops until the people who don't normally participate until it's too late get involved. By the time they get in, there's nobody left and the entire process repeats itself.

Different markets manifest differently. Let's take the oil market. As we know, crowd psychology is irrational at times. That's just the way it is. Think about this. Remember back in 2005 when Katrina hit, how the oil market went through the roof? Why did it go through the roof? Well, weren't we in a major bull market for stocks, the country in a period of relative prosperity, and traders were fixated on supply concerns as opposed to demand destruction? As Katrina grew in strength and the probability increased that oil rigs in the Gulf would not only be shut down but possibly destroyed, weigh heavily on traders? You bet it did.

Fast forward to 2010 and the BP oil spill. Didn't we lose millions of gallons into the Gulf? Why did the price of oil collapse? You can make a case that the period after May 2010 was a crash. Obviously, oil was spilling into the Gulf with no end in sight. If it were 2005, no doubt prices would have gone through the roof. So what was the difference? Simply put, market psychology. I'm always asked, as far as commodities like oil go, isn't the seasonal factor the most important ingredient? In short the answer is no. Seasonal factors play a part, but remember that May and June represent the peak of the driving season as far as oil is concerned. Yet prices collapsed.

So what happened? Well, as we know the stock market topped in April 2010 and in some instances, like Nikkei and the BKX banking index, that was a top. Markets were in a serious correction mode. But as we looked deeper, we saw pictures of wildlife being destroyed as well as our pristine beaches in the southeast. While the fear was irrational, there was the sentiment that oil would finally be replaced by alternative energy sources and there would never be supply concerns again. When sentiment climaxed, something commodity trader Mark Fisher calls the “fear premium,” traders started coming back into the market. Generally speaking, when a commodity that formerly could do no wrong, like oil or gold, falls, it will fall until such time that there is serious doubt that it could rise again.

You can also leverage this information to your benefit. Let's say we know that oil and equities are going the same way. Markets may be sitting at a key inflection point and we don't know what will happen. Then a news event materializes, like a fire in Canada that knocks out a key refinery. How do traders react to the news? Are they fixated on supply concerns? If not it could mean both are in a bearish phase and you should be or stay short. If a hurricane hits the Gulf and nobody cares, odds are we are in a bear phase. On the other hand, if oil rallies on the same kind of news we know which way traders are fixated. It's not the news event that's important; it's the reaction to the news that counts.

It's also important to realize that not everybody knows what they are doing. There are a lot of intermediate-level traders who play news events. Why? Because they are sitting in front of their screens and are not accountable to anyone. We do have to use the poker analogy. If you sit down to a game and can't figure out who the sucker is in the first hour, chances are it could be you. Likewise, P.T. Barnum said there's a sucker born every minute. How many times have we come to an important jobs number or some other key economic data point that caused extreme buying or selling, only to see the market reverse back the other way in an hour? Happens all the time, doesn't it? Just because you see a market take off or collapse, does it mean it's right? The market is always right, but that's not what I mean. In the course of a day, there is all kinds of noise that causes the market to back up, jump up, or zig zag. After the noise it tends to get back in its rhythm. But the true trend is always right. The reason being that markets are still creatures of emotion. They'll go to extremes at highs and lows. Why? Simply put, human emotion. If you see a market take off, a pullback, or a down market suddenly stall and can't understand the reason why, maybe there is no reason. It could be that the people who are causing the market to do what you see it doing don't

know what they are doing. Have a little patience and, depending on the time frame you are looking at, you may see it retrace that move within the hour or a couple of days. Let's remember that the smart money is more apt to sell resistance and buy support. If the market has been rising for four days and on Friday the jobs number is good and the market is near resistance, that spike up you are observing could be retail intermediate-level traders who don't know any better. It could also be a bunch of people who are looking at a stochastic or MACD in the wrong time frame. Whatever the case, the smart money is usually not buying that sequence. An hour later it starts to sell. That is the smart money creating the next real move.

We could also have big spikes on news events in general that get erased shortly thereafter simply because amateur buyers bought late in the trend and larger institutional sellers were waiting for price to come to them.

As you know, the final end of bull markets materializes when people who have absolutely no interest in the stock market get interested. This could be waiters, cab drivers, and your granny who never fired up a computer in her life. That's obvious. But highs in the market come in phases. We've been in a rally since 2008 and 2009 and peaked up to that time in 2011. In 2011 we had headlines of companies like McDonalds looking to hire 50,000 workers nationally and people from all walks of life showed up to apply. There's nothing wrong with McDonalds, and if you need a job, you need a job. However, last time I checked, McDonalds typically hires high school students. But that's not the point. The point is a bull market ends when everyone is invested. There isn't anyone else. With unemployment as high as it's been, tens of thousands will not be able to participate and it might take years for them to participate. What I'm trying to say is we appear to be years away from a market that is capable of being fully invested. Initial proof of that hypothesis came in 2012 when the market went higher still. So what could top out a market? We could see a good euphoric top such as we saw with the Bin Laden sequence. In the near to intermediate term, a stock market doesn't need the condition of 100 percent investment. It's not going to happen. That being said, let's take a look at stock market history and see how the psychology and history of the day blended with the charts. These examples are a little more advanced as you'll see. This is what we wrote in the *Short Term Update* on March 17, 2011:

We are not concerned about the news events exactly but more concerned about the reaction to them. But I will tell you this; I am particularly amazed that the earthquake hit at the point in stock market

history that we were right near the bear market channel line in the SPX. I do think that is having a major impact on the reaction to the news events. In any event, it was a month ago that I told you that in the normal course of events; you don't normally get fear trading at tops. You get euphoria and in selected instances in history you can get fear trading at the top. The only reason you'd get fear trading at the TOP is if fear is exponentially magnified by the time you get to the bottom. So let's look at a few sequences that we may compare these times to.

## ■ Historical Perspective

Figure 14.5 is a daily chart of the Dow during the Czech crisis in 1938. As you can see, 1938 was a bounce-back year from the peak and Great Depression II bear of 1937. It was a good rally and the peak on July 25 coincided with a news event that suggested that in no way would London accept a pact where it would accept the USSR as a diplomatic partner. Events leading up to that point suggested the market climbed a wall of worry. There was tension in the Sudetenland as well as elsewhere. If there was any euphoria at the time, Howard Hughes set a new world record by completing a flight around the world in 91 hours on July 14.

The real trouble started at the retest of the high on August 25 when Hitler announced his intention to invade Czechoslovakia. From that point to the



FIGURE 14.5 Czech Crisis

end of September the world was on edge as the drama unfolded between Hitler and Chamberlain.

There were two mini-rally sequences in this period. The first one came in the first week of September when the USSR announced its intention to fight the Nazis if war came. The second one came about a week later when Chamberlain arrived in Berchtesgaden to talk peace with Hitler. Prices peaked the day Chamberlain announced they would *not* go to war to help the Czechs. During that last week of September Hitler imposed a deadline of October 1, but invites the Daladier and Chamberlain to one last meeting known as the Munich Conference. At that time the low was put in, and by the time the market gapped up several days later the Munich Agreement and Peace In Our Time was announced. The market gapped to the final high in November, which came within a day of Krystallnacht. But the point of the sequence is Europe assumed war would come, and as fear built, the market continued to drop and only when it looked like they could get Peace In Our Time did the market finally turn back up. The next sequence was a rally to the Krystallnacht event where irrational fear turned the market just like it did in 2011, when the Arab Spring and the war in Libya began.

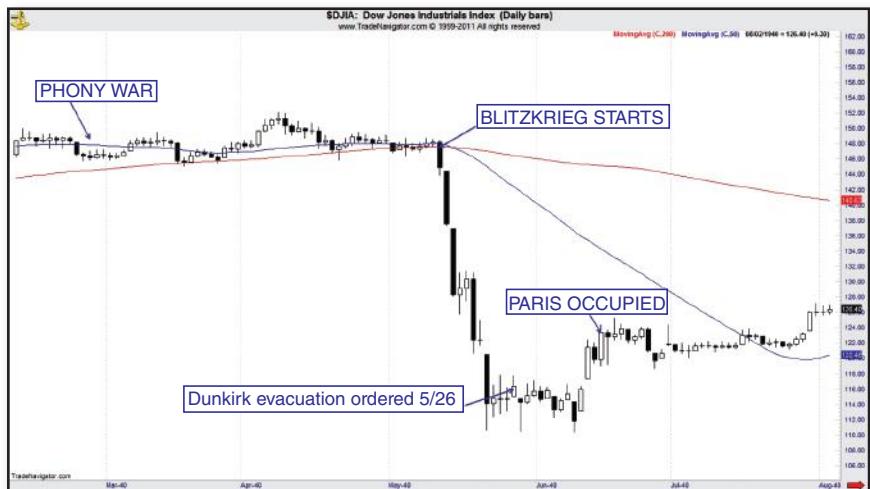
Why are we looking at this period right now? First of all the comparison is both periods are post-market crash. Then as now we are dealing with the aftermath of either a depression or what we are calling the Great Recession. As opposed to 2000 or 2007, we are not dealing with the popping of a bubble. In that time markets were making highs in periods of extreme stress and no longer did they climb a wall of worry. It's important to understand the prevailing psychology of the day. Up to the point of the Czech crisis, the geopolitical mood was such that Hitler only wanted territory that was either Germanic or taken by the Versailles Treaty. Munich was the first time the world was seriously confronted by a new reality. You can see from the sequence in September 1938 it began from a fear base, which is out of the ordinary, but as you can see it only got worse. In August, Hitler announced to Admiral Horthy that those who "sit at the table must help in the kitchen." From announcing his intentions, it took one month to declare a deadline to the start of the war. In that sequence, the geopolitical climate of the world changed for good. It was barely six weeks later when the world was shocked by Krystallnacht. It was the kind of barbarism not seen in Europe since the Dark Ages.

There were rallies mixed in with periods of fear until the bottom in 1942. Most notably was the sideways market during the Phony War after France and England declared war in September 1939, until the blitzkrieg of 1940,

which knocked France out of the war (Figure 14.6). That is the subject of the next chart. On May 10, 1940 the tanks started rolling across Western Europe and that was the day the market started seriously selling off. What's interesting to note here is how the bottom formed. You might recall over 300,000 troops were trapped at Dunkirk and Hitler could have captured them, perhaps effectively knocking England out of the war right there. Imagine the fear at that point! But the evacuation was accomplished over a nine-day period, which closely coincided with that gap up even though France was effectively gone and Paris was occupied only days later.

What is the point of this whole discussion? It appeared that in early 2011 we were going through a period of market psychology where in fact prices were selling on fear and buying on relief. It's no longer pure bull market psychology. It's very complex; the 1938 to 1940 market was similar to the 2011 market because while they were bear phases neither of them went to fresh bottoms. The 2011 market never took out 2009 and the WWII market never took out the 1932 bottom. Nevertheless they weren't your traditional pure bear markets because neither started on the kind of complacency apparent in 2007 or even 1929.

From what we've seen, in a pure bear market like the one from 2007 to 2008, it began in a period of euphoria and ended with the kind of fear that we really thought the sky was falling. In essence both 2011 and 1940 were bear market corrections (a big one) in a larger secular bull market. It started with fear and only built on it over the next three years. By the time this bear



**FIGURE 14.6** Fall of France

market ended in 1942 you know that Hitler was at the gates of Moscow, fighting the British in El Alamein, and the Japanese were raging across the Pacific.

In 2011 we had uncertainty in the Middle East as well as one of the biggest natural disasters in modern history change the landscape in almost the blink of an eye. The point is fear is building upon fear. It's not the same kind of market we've had over the prior two years. Nobody at the time can be sure exactly what kind of market it would be entering, but it does appear to be the kind of market where fear does give way to bigger fear. Now we know looking back, but at the time we didn't anticipate the 2009 bottom would be violated because it didn't start with classic euphoria.

Did you follow this carefully? I compared the period of the Arab spring to the period very late in the bull market from 1938 to 1939. Markets were peaking on fear and no longer a pure bull psychology. Of course, we were doing the best we could at the time because now in the fullness of time we know the market was in transition. In February markets peaked when the Libya news hit the fan and bottomed with the Japan disaster.

They rallied again to make new highs in May and July. As we know, the May high came in on some euphoria with the Bin Laden event. Here's what you should take from this chapter. First of all, your garden-variety bull rises on a wall of worry and drops on complacency or denial. But they can also top on fear in an extraordinary circumstance. The market of 1939 topped on fear, but in the bigger scheme of things we know it was not the end of the bull market. Only one portion ended. The move from 1932 ended, but we were very far from the place where everyone was invested. That didn't really materialize until 1966! In 2011 markets topped on a combination of fear and euphoria based on geopolitical events. If this is any guide, eventually they will be much higher, even if it takes years to materialize.

## ■ Your Trading Psychology

Many beginning to intermediate traders have never given any thought to who might be on the other side of the trade. You should never forget this is a zero sum business. There is always a winner and a loser. As tough as this may sound, for you to make money, someone has to lose money. It's important to have a method and an edge. But to get there you have to go beyond the robotic instincts of your early years. If you are thinking too much about the charts, there is no way you can possibly be thinking about what the other

guy might be doing wrong. You are too consumed with that you might be doing wrong. This is why we take a comprehensive approach to our training. We want you to be able to understand any condition in any market. The following information by itself is not sufficient without a firm foundation.

Some of the following came from our newsletters and will help you follow the markets from one sequence to the next. Ours is likely the only newsletter that combines so many powerful methodologies (Gann, Andrews, Fibonacci, Support/Resistance, timing cycles, psychology), so a subscription will certainly help you on the road to mastery and shorten the learning curve. We've evolved this second edition from lagging indicators like the MACD because so many of you grew up on them. But this section can help you evolve over time to go to the next level of pattern recognition. As your pattern-recognition skills get more sophisticated, you will be able to spot tendencies and what actual patterns mean because readings and patterns are nothing more than picture and numerical representations of human emotions.

Then there is empathy. That's right, this is not a novel. It's the ability to put you in the other guy's shoes. Watch what he is doing and feel what he is feeling. The truth of the matter is, if a lot of the people trading are losing money we should be able to spot the places where they are obviously wrong and do the exact opposite. The simplest thing in the world would be if you are losing trades, just start buying when you think about selling and sell when you think about buying. In reality that might be more complicated than it appears on the surface and I don't recommend it, but I think you get my point. But if you are a member of a chat room and see a bunch of traders always losing money, then you could do the exact opposite of what they are doing.

But think about the times you went long, got underwater, and yearned to get out. Losers don't use stops. They wait until the market comes back to their entry and then cry uncle.

Somehow we always get back to professional sports. In order to take advantage of the opposition's mistakes, they have to be pretty good to begin with. Take the Arizona Cardinals. They are halfway decent, they can take advantage of the opposition's mistakes, but they themselves are not technically sound, so they make their fair share of mistakes so that the opposition turns the tables back on them. I was at a game in 2011, which was a season with too many mistakes. For example here's a team that recovered a fumble inside the opposition's 20 on the opening drive of the game and only got a three instead of a seven. The bottom line is the way the first



**FIGURE 14.7 AMAT Part I**

half went they could've been up 21-0, but at one point were down 7-6. They were ahead by 10 with five minutes left in the game (almost an insurmountable lead in an NFL game) and ending up losing. The best teams are sound and take advantage of the other team's mistakes. Getting back to our not-so-mythical trader who doesn't use stops, you have to know there are a lot of people who only act when it feels secure after the move is well established. Those people are probably wrong 8 out of 10 times. I want to start this theme with simple examples you can spot and use on your own.

We'll get more sophisticated as we go, but I want you to start thinking of the people behind the pattern and tune in to what they are thinking and feeling.

Take this AMAT chart in Figure 14.7 and Figure 14.8. Look at the top. Look at the very last sequence. Think about this, it's a long bull market and you had a bunch of people pile in. You are not going to know they are the last ones in when it happens, but you don't have to. You don't have to worry about it until after the first leg down. Who do you think is buying off that first drop?

Isn't it the people who are erroneously buying what they think is a dip? You don't really know if they are right either. There is a price and time symmetry that you see on the weekly chart. The move off the bottom has a range of 9.13 where the top is 16.93 with a bottom of 7.80. Then when we take the square roots, the last rally leg has a factor of 0.91. What we



**FIGURE 14.8 AMAT Part II**

have is a range of 9.13 and a factor of 0.91. But the idea here is to look at those people who piled on and think where it is they might be crying uncle. Wouldn't it be close to where they bought in? If you are tracking anything and it fails close to breakeven for late, late, late buyers, that's a sign that what you are looking at in the preceding rally could be a top. It's a place you would strongly consider going short. Smart traders are watching this and are looking to establish short positions. The combination of the two is what drives the new trend lower. For the next examples, let's not focus on symmetry, just the pattern.

Here's a recent example. It's a simple play but you need patience to spot it. There is a gap up after the move, which creates the island top. It dips leaving latecomers below water, they exit near breakeven, and the bears swoop in Figure 14.9.

Looking at charts this way we are working at bringing the pattern to life, because at the end of the day all we have are patterns that are visual representations of human emotions. Never forget that. We have different groups of traders. Ones that know what they are doing and another group that does not. Mostly it's the institutions. Those traders are very good but not infallible. The computer-generated programs are not infallible. Most certainly we've seen that hedge funds are not infallible either. There are times when they get greedy. Then you have a small percentage of little guys. For whatever reason, people make mistakes and get on the wrong side of the trade. It's your job to think about how you would have reacted if you got caught



**FIGURE 14.9 AMAT Part III**

on the wrong side. Simply put, you'd want to break even, get close to break-even, or avoid a big loss.

In the E-mini, you have mostly institutions and hedge funds. It's the same in Forex, but there you have an element of the retail participant from the public. When it comes to stocks, you have institutions, hedge funds, fund managers, and the public. In all cases you'll have people putting on hedges against other positions. That's why the action sometimes does not make sense.

In some instances you'll have people out there who want to trade but are in over their heads. It's not that they shouldn't be here. They just don't give trading as a business the respect it deserves. I'll be frank with you. Retail traders remain stubborn and are resistant to investing in their own education and may only learn from blowing a few bankrolls. They learn after much pain and then they get serious. But you can take advantage of certain situations.

Okay, so what's the point? This is a business of strong psychological lures. Anyone can trade and when you are sitting in front of that screen you can do anything. Nobody will know. P.T. Barnum said there's a sucker born every minute. Sad to say, it's true. I just don't want you to be the sucker, and taking that one step further I want you to learn to recognize who the sucker is. That's not to say every situation has a sucker, but you have lots of situations where people are wrong and will have to liquidate. I'm here to show you how these situations develop.

One of the problems is with the training and tools available to the average trader. The first edition of this book was intended to help traders who were going to use lagging indicators no matter what. At least they had a good chance by learning the timing element to technical analysis. In this revised edition we are encouraging you to go beyond that. We've given you a bridge to go from your original level to a whole new level of thinking. And if that's all you are using, there will always be a ceiling on your potential in this business. A lot of you have realized it, but are wondering what the next frontier is. It's really not more technical analysis, but looking at what we already have in a different way. You have to realize the winners are looking at something totally different than the losers are. That's why there are winners and losers. This is a zero sum game, folks. I know the government tried outcomes-based education, where if little Johnny tried really hard but still thought  $2+2=3$ , they told him hooray because he came close. You want to learn, practice your skills, and if necessary use a simulator when trying new things. But at the end of the day, there is a winner and a loser. It's mostly a closed society and the people who learn how to trade have done so because it is passed on from one generation to the next. I know this because I've had the chance to meet some very interesting characters at these conventions the past five years. They pass it down.

Oh, you do have people who are so determined, willing to blow several bankrolls, pay for education, and figure it out, but we are in the minority. Anyone can do it; all it takes is commitment.

It's a tough transition for someone who only looks at lagging indicators. The smart traders know it; we are not revealing anything new here. However for the beginning- to intermediate-level trader who never thinks about who might be on the other side, this could be the difference between becoming a winning trader and not becoming a winning trader. Bears fuel bull moves and bulls fuel bear moves. If you know where the stops are and the other side is wrong, you get a free ride.

Losers can range anywhere from amateurs who have no clue what they are doing to people who just miscalculate. It happens. I'll say it again, hedge funds miscalculate and I think they do it more than many people realize. But no matter who it is, none of us are going to be on the right side of the market all the time. Mostly we are not dealing with individuals, these are institutions who put forth huge blocks of trades. But at the end of the day, it's still people who make these decisions. Take Paulson, for instance. Here's a guy who runs a hedge fund where one of the funds was off 47 percent. This is not some rank amateur. Then you had the boys over in London who supposedly

ran one of the most successful energy funds and lost the \$400 million in four days when oil topped, and were quoted by Dow Jones as saying they had no clue. All they really had to do was understand the universal aspect of Gann and market timing.

Personally, I think there are a handful of hedge fund guys who are absolute wizards and David Einhorn (the guy who tried to buy the Mets) might be one of them. I also think some of these hedge fund guys were right when they went against the subprime mess and made their once-in-a-lifetime fortunes out of that disaster. But I don't think that hedge fund people overall need to be looked at like they are financial gods that the media portrays them to be. They make mistakes and get caught on the wrong side. But those guys are different than the retail people you see piling in near tops. So you have two groups of people. This dollar chart is a classic textbook example of what we are talking about and it is probably not retail people, in Figure 14.10.

The takeaway here is to realize anyone can be wrong at any time. With currencies it could be banks and hedge funds. It could also be government institutions. The point is, the charts are universal because we are dealing with people and no matter how smart they appear to be, they are not superman.

I'm not exactly sure who bought the absolute top, but it doesn't matter because it started a perfect unwind. Every sequence has been met by someone buying a dip, ending up underwater, and having to liquidate on



**FIGURE 14.10** Classic Unwind

every bounce. I think the most dramatic example is that last bullish bar which had the look of a morning star in the middle of the chart, yet within one trading day those people were underwater as well. This is a 60-minute chart. That sequence was dramatic enough that the 90-degree pivot, which is part of our Gann work, did not hold. In the last case they didn't even wait to break even, you had a mass exodus that was represented by the big bearish bar below the 90-degree pivot. Don't forget that when you have a strong Gann line like a 90-degree mark, if it breaks it usually will do so in dramatic fashion. In this case it's even more dramatic because where do you think all of the people who thought they were buying a bottom put their sell stops? That's right, and that was the rocket fuel that propelled prices lower. Here's the problem with a move like this. You see the morning star, when there's short covering—I mean real short covering—you usually see more than one bar. In this case the second bar comes and it's small. The third already ends the move. Think about you being in there at the high end of that first white bar. It doesn't take long for you to be underwater. You place your stop just below the low. The odd thing is you don't ever think it's going to get there. On the other side of the coin, if a one-bar move off a low starts to seriously flatten out, smart bears usually start thinking about shorting it. Why? Simply put, they know the people who got into the bar are going to be nervous. They'll be the first to go, as some might even have their stops halfway up to avoid a big loss. Think about this for a minute. How many times did you buy a big bull bar off a bottom and because you were afraid to put the stop too far away placed the stop only halfway down?

Now prices have come all the way down to important institutional support and the people who bought the first portion of this move off the May bottom might be getting a bit nervous right now. But it's too late, they have their stops in place and those get tagged. In terms of Gann, after breaking a 90-degree line chances have improved for a breakdown. Usually those good calculations don't break down. But that's another story.

But here's what you look for. When you get institutions or a series of institutions on the wrong side, they end up underwater and get out on the next bounce near the breakeven point. It's one of the principles that fuels our polarity flip play. This dollar sequence is one of the best examples you'll see. Think about something else: Not everyone uses stops, that's how they get underwater.

What we've accomplished in this chapter is a discussion about the psychology of markets in both a macro and micro way. You have to look

at the big picture from a specific lens that interprets news events from the emotions they create, not the specific events by themselves. But once you understand the emotion of the market you can determine whether you are dealing with an early-stage bull or bear. Then it's time to look at your micro opportunities where you put yourself in the shoes of the other guy and try to figure out what he'll do and you end up doing the exact opposite. It's different than looking at an indicator, but you just don't go from point A to point B. It's a journey where you develop these skills over time.



# Building the Bridge

If you are still with me, congratulations! As you've seen, this book is not an easy read and it's not supposed to be. There are dozens of charts, and each is meant to be studied over and over until you get it. We haven't mentioned money much in this book because I believe to get the money you have to keep your eye off the prize. To get to the money you have to be absorbed in the process. This book is about the process. It's about the process of truly understanding how financial markets work.

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To reiterate, the original version was intended to teach people how to be more precise with their indicators. This revised version has the mission of being true to the original but weaning you from lagging indicators and showing you how to recognize turns based on symmetry calculations, and in certain examples show you some trading strategies with some trend line work and Andrews pitchforks. It's almost two books in one. To be true to the original we are leaving much of this chapter in place and going to add to it. Your takeaway from this chapter and the entire work is an evolution over time. I recommend to those of you who work with lagging indicators to slowly over the course of time start putting square root readings on your charts so you can learn to trust them. It's not going to happen until such time as you can have the neuroplasticity in your brain start to kick in and you automatically start to recognize these opportunities without using the indicators.

One of the benefits of presenting the material this way is a trader at any level can dig into this material and find a starting point. You can be a

beginner to intermediate level trader and find a good starting point. You can even be a hedge fund manager and find the right starting point. In fact, if you are hedge fund manager you ought to study the calculations in the Gann chapters very carefully.

It's up to you to do the work from here.

Using sports once again as an analogy, athletes spend years in training to get to the professional level. Once they get to the show, they burn the midnight oil studying the opposition and refining their own techniques. Baseball pitchers have certain mechanics they must use and have coaches filming them to see if there is a flaw in those mechanics. It's the same with football, hockey, basketball, and any other professional sport you can think of. They don't worry about touchdowns, home runs, three-point plays, or winning the championship. They all know the same thing. If they take care of the process, the winning will take care of itself. It's the same thing with financial markets and trading.

It's for this reason I've kept your eye off the prize. The prize is making money, being profitable, and achieving your financial goals. I'm here to say I believe you can make a lot of money utilizing what is written in this book. You now have in your hands an incredible pattern-recognition system, perhaps the best one on the planet.

What I'm going to do for the rest of this book is show you some of the highest-probability setups using this methodology. I realize I've thrown a tremendous amount of information your way here. For many of you, it's the first time you've ever been exposed to this methodology of either market timing or Gann. There's so much information here you can get paralysis by analysis and you do nothing. That's not the goal of this book. It's also not the goal here to have you think all you need to do is count the bars on the way to your fortune. It just doesn't work that way.

One of the hardest things I had to learn along the way was to realize that just because a chart moved 21, 34, 55, 161, or any other important time bar we've discussed in this book didn't mean the chart was necessarily going to change trend right there. Furthermore, just because there was a change in trend, did we know how powerful it would be as referenced by that banking turn in 2011 after the 160-day drop. What I've come to realize and want to hit home to you is first we need an appropriate bar and then we need to see the chart react to that bar before we act. That might mean you will have to have more patience than you've ever had before. Gann is not a crystal ball and neither are the Fibonacci windows. What we want is to see validation. If we know the 161-time window is coming, we don't front run the window,

we wait for the turn. In the case of Gann we may not even need a time window, we just wait for the reversal, and then we do the calculations to see what symmetry shows up.

What this also means is that when you are in, you should have the confidence and conviction to stay in because you'll have the confidence to know this is how these markets really work. The problem many traders have, and I know because I've been there, is you pull the trigger on a trade, nothing happens, and you exit the position too soon, only to see the market go without you! This happens to traders because they really aren't confident to hang in there because there was an element of doubt as to whether they should have been in the position in the first place. Most traders lose money not because they can't trade, they lose money because they trade too much. The vast majority of setups are mediocre at best. You can't be involved in setups that are mediocre. If they work out it was luck, whether you like hearing it or not. We are not here to gamble. We are here to take advantage of opportunities that give us a high-probability chance of winning. What we want to do is follow a process and discipline. We want to do the basics well. If we can do that, the money will take care of itself.

Before I go into these setups, I hope you now realize why I put chapters on psychology and sentiment here. Most trading technique books will throw in the obligatory trading psychology chapter at the very end as a throwaway. I want you to know that I don't think any of the setups I will show you in this chapter will be of any use to you unless you are psychologically prepared to take advantage of them. What that means is if you are going through one of the 10 issues in Chapter 10, I hope you've dealt with it before you put your bankroll on the line. Then I also want you to think about the psychology of the market to determine if it makes sense. Some of the places that successful trading requires you to pull the trigger can only be accomplished by someone who is psychologically prepared to do so. We've also given you enough choices to do your own due diligence and get help if that's what you need.

Another thing, some of you who overtrade really have never seen what a real high-probability setup looks like. You've never been taught what to look for. The setups here may be similar to other Fibonacci books, but none of them include the time function the way we have together over the course of this book. For that reason I feel confident in saying most of you will be seeing these setups presented this way for the very first time.

This is not a black box system. What we are doing in this book is teaching you how the most misunderstood area of technical analysis works. For those of you who are newbies, you are learning correctly the first time. For those

of you who are already seasoned, profitable traders you'll probably increase your effectiveness by 10 percent or more. Remember we are about process in this book and part of the process is having fun. Let's get the party started!

## ■ Time and Divergences

I like this BBH chart, in Figure 15.1, on an hourly basis because of the Fibonacci relationships. It exhibits many of the characteristics from the first edition. In this case, as in every case, you need to get into the habit of measuring pullbacks as many times the final leg will be either a 1.618 or 2.618 extension of that pullback. This methodology is excellent for topping or bottoming price point targets. This retest of the high on twin Fibonacci extensions with the bearish divergence on the MACD coupled with the 88-89 bar window with the dark cloud cover is a timeless setup.

We have a larger set of Fibonacci extensions off the lower pullback, which gives us the first high. Notice the smaller Fibonacci lines as well near the high. As you can see the chart tops within pennies of that last 1.618 extension point. Let me remind you that you are looking for as many of these relationships to



FIGURE 15.1 BBH-Fibonacci Relationships

line up in the same place. The principle is the same whether we are working Fibonacci relationships or Gann symmetries. These are the kinds of clusters that create turns in all degrees of trend. Your entry should be below the low of the white candle at the 88-hour bar. By that time you can anticipate the bearish setup because the hourly bar is almost expired.

Do you need all of these factors to line up? All I'll say is that more factors lining up in your favor equates to giving yourself a better chance to win. I'm showing you the best setups and what to look for. One of these factors may be missing and the chart could go anyway. In my opinion, you can still make money accepting less-than-optimal conditions but if it works out for you it's more luck than skill. It's more gambling than trading!

Figure 15.2 is a Barrick Gold hourly chart. We have two good setups on this chart. The first one has a bearish divergence and it tops in the 34-hour time window. It leaves a good upper tail with a bearish engulfing candle on the next bar. You should enter just below the low of the bar with the tail. As you can see, that sets up a beautiful short. Then at the bottom a positive divergence develops in the 47 (Lucas) hour time frame. We get a beautiful bullish engulfing bar on the time window. Tails are a bit different. You shouldn't wait until the white candle completes because your stop (which



**FIGURE 15.2** Barrick Gold Hourly

should be below the low of the tail) is too far away. If it goes against you (and sometimes it will), your loss will be relatively large. You can enter once the white candle gets above the high of the final black candle with the tail. When you have a tail like that, once the high gets taken out you have a good chance a low is in.

Check out the next chart, in Figure 15.3, which is an hourly of CL-Colgate Palmolive. There are several interesting factors going on here. This is an hourly chart, but it is derived from a daily chart that isn't shown. We are at a 26-day top where the MACD peaks and we also make a higher high on the 47-day high-to-high cycle. The second top is also accomplished on the sixtieth hour of the final leg and you can see the smaller Fibonacci lines target the 1.618 extension of the last pullback at price point 63 as the target for the turn. That sixtieth hour (scaled down from the daily chart) leaves a tail on the forty-seventh day of a high-to-high cycle, which is a really good cluster point. The best place to go short is below the low of the 60-hour bar with the tail.

What you want to do in this case is watch both the daily and scale down to an hourly chart to be able to pull the trigger where you have the signal and risk is at the lowest. If you followed this recommended entry, you received a bonus the next morning when the stock gapped down.



**FIGURE 15.3** Colgate Hour Peak

The themes of this book are drill, practice, and repeat, then do it some more. I'm presenting these various charts so you will see that these setups are not flukes or something that happens every once in a while. There are thousands of charts and they appear every single day. All you have to do is find them. The next chart is DD (Dupont) in Figure 15.4. We show an hourly chart, but we have the daily annotations on them as well.

Here we have quite a bearish divergence, wouldn't you agree? Where does it top? On a beautiful cluster of 161 hours and 33 days, right inside that 34-day window. Not only do we get a perfect MACD/time cluster setup, but we also have the Fibonacci 2.61 extension of the pullback working in our favor as well. But here's one of the pitfalls as well. As that bearish divergence is developing, we have three small pullbacks near the top. Which one do we stick the Fibonacci extension calculations on? That's a very good question. The truth is we don't really know which pullback the market is going to validate as the top. Since we don't know the answer to that question we have to measure all three corrections. What we have to do is let the market tell us which one is the right one! In this case it's the first one off price point 42.50 down to the 42 area. At first it hits the 1.618 extension point and pulls back. Why wasn't that your trigger? It might have been, that high is 122 hours



**FIGURE 15.4** Bearish Divergence

(Lucas 123-1), but we are only at 27 days to the trend. So when we hit a time bar on the hourly basis but not the daily basis it is likely to be a smaller pullback. You could have taken that signal, but you would have been stopped out. A 33-day/161-hour cluster is much better than a 27-day/122-hour cluster. In all cases, the signal comes when we take out the low of the white candle or high of black candle if it's a bottom. Remember, the signal comes about when we get the reversal to confirm the time window. Once we clear it, that is the entry.

On a scale of 1 to 10, I hope you can apply some thinking and realize one setup is much better than the other. I'm not saying you shouldn't have taken the first one, but I want you to see what separates decent or mediocre setups from really good ones. Sometimes it just requires some patience and willingness to pass an opportunity.

It's the same thing on the next chart, Figure 15.5. As we have a complete ABC flat pattern correction that ends on the two hundred sixty-second hour of the pattern, we lift off to the final high of the sequence, which is the one that validates the bearish MACD divergence. In this case we have a larger corrective pattern to sink our teeth into and you can readily see the high comes in perfectly at the 1.618 extension of that correction. It does on a



**FIGURE 15.5** Silver 161 Extension

17-hour (Lucas 18-1) final leg which in the larger picture clusters with a 79-day cycle. On tails, the entry is above the tail and you can set your stop ideally below/above the tail. If the tail is extraordinarily large, you can place the stop below the white candle in a bullish reversal or above the black candle in a bearish reversal. If you do that, you may end up getting stopped out after all because the end of the tail really is the proper place. However, if the tail prevents you from taking the trade in the first place, the risk of a small loss may be better than missing a potential big move. The choice will have to be yours and it may depend on market conditions. Keep in mind if the tail is too big, you can always adjust your stop by scaling down to a smaller time frame.

Are you getting the hang of this? I hope so because when you know what to look for and have the confidence to know this is actually what you are seeing you will learn to trust it much sooner. To wrap up this first section you want as many bullets as you can get. Strive for all of them, which are divergence, time calculation, and Fibonacci target. Since the market doesn't always give us a perfect setup, you may elect to pull the trigger if there is no divergence (especially the more aggressive among you) but realize if you pull the trigger without a divergence you should be scaling down to a shorter time frame and be ready to exit much more quickly. If you are following a chart on the hourly time frame, have the Fibonacci target and time bar, you may have to scale down to a 15-minute chart to get a divergence. If you scale down the time frame you'll always find a divergence, but the trade and profit will be smaller.

One of the more important target setting exercises is measuring B waves for a target for the end of C waves on this chart of Arch Coal in Figure 15.6. As you can see from the Fibonacci lines we got a very good target near 26 for the low. We haven't spent much time on exit strategies here, but you can stay short with a trailing stop just as you can stay long in a bull phase with a trailing stop. Let the market take you out as you let the winner run. Also, having drawn the Fibonacci 1.61 target well in advance, you'll have a very good idea where this thing can bottom. Finally at the low you have a cluster of Fibonacci price targets, time and, a blended morning star pattern. That is a good clue you should be out of your short positions if you weren't taken out already by the choppiness as we approached the bottom.

There is also another factor going on here. If we take the first wave down from approximately 40-34 and measure from the B- or second-wave high at the 90-hour mark, you will see a projection to 26 because that area also represents the 1.618 common price extension we covered in the first part



**FIGURE 15.6** Arch Coal 260 Hour Low

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of this book. As we've seen many times in this book the common Fibonacci price extensions don't necessarily line up with these advanced Fibonacci calculations that measure the extension of a correction. Sometimes they do, and when we will get a cluster of where we use both methodologies and the target lines up in the same place is where we have a very high-probability turn. Get used to drawing the extensions of both common Fibonacci extensions as well as the advanced calculations. What you will generally find is one area where everything lines up, that will be your high-probability turn point.

Figure 15.7 shows a close up of the action near the bottom on the same chart. I want you to see the blended morning star candle on the two hundred sixtieth hour of the pattern and how the big white candle engulfs the preceding five black candles on the way down. In this case you have a larger-degree target derived from two Fibonacci extension points, an hourly time bar, and a beautiful MACD positive divergence. In this case you have a tail and can buy in once we get above the high of that 260-hour bar which is around 26.60.

Many traders have never seen setups expressed with this type of detail. This is what they look like. Other books will give you the common Fibonacci extensions and a couple of others may even give you the extensions off the



**FIGURE 15.7 Close Up**

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B wave earlier in the pattern, but none of them combine that with the two hundred sixtieth hour of the pattern. Some books on candlesticks will give you the morning star, which is okay, and others will give you the MACD divergence, which by itself is not a signal you can act on. However, when we combine all of the factors in this chart, we have an incredibly strong pattern-recognition system that is almost unbeatable. I say that because there is no such thing as a 100 percent iron-clad guarantee when it comes to financial markets, but this is as close as you can get.

## ■ More Extensions

I've shown you what happens when you measure extension points from various retracement levels. They are not as numerous as the divergence play, but they are very reliable when you do catch them.

On Beazer, in Figure 15.8, we have a cluster of two extension points off corrections. Like its cousin the B wave, the extension measurement off a second wave many times will give us a price point that targets the end of the entire pattern. We've seen that earlier where the measurement off the



**FIGURE 15.8 Twin 4.23 Extension**

B wave was a very close target for the entire bear market in the NASDAQ from 2000 to 2002. This chart speaks for itself, but what must be observed is how the pattern completes right on the one hundred sixty-first hour of the second half of this pattern as well the one hundred sixty-fifth day of the entire pattern. Note there is also a small divergence with the A-wave low near August 14 on the forty-seventh hour. There is another divergence again on the week of the August 21 that is on the thirty-ninth hour. That particular bar is a high-wave candle, which implies uncertainty to the downtrend at that point, and a small corrective move up begins. Only the most aggressive traders should play something like that. Finally, the two white candles at the bottom, which is a bullish piecing pattern, is the point where you go long. The entry is above 37 just above the first white candle as you clear the black candle.

To show you how reliable this calculation can be, check out Figure 15.9. The 4.23 extension of the second or B wave caught a low on the thirty-fourth day of the pattern. This has been an incredibly vicious downtrend, but even in the face of a large move, the chart still bounced. Now, if you went long for anything more than an intraday trade you would have ended up getting stopped out. You are going to get stopped out! But this is an extreme



**FIGURE 15.9** Oil 4.23 Extension

situation and most times the situation isn't as acute. More often than not that 4.23 extension will at least give you a decent countertrend bounce. This is the case in another chart we saw earlier, which was the Dow Transports, in Figure 15.10. This chart gives you a variation on how to measure these calculations. Common Fibonacci practice when it comes to triangles is to measure the widest part of the triangle and take that as your thrust measurement from the end of the triangle for a good target for the end of the move. We covered that concept much earlier, but we also stated it does not work well when the triangle is a B wave as opposed to it being the fourth wave.

In this case what we do is measure the beginning of the triangle not to the low but to the end of the triangle. From there you can see the various extension points and a chart that eventually tops right on that 4.23 extension line. As opposed to what you just saw on the crude oil chart, the 4.23 point did yield a very decent trading move in the other direction. This chart has waves that are difficult to count, and the 141-day cycle doesn't seem to fit, but when we do get to the top that one hundred forty-first day is 78 days from the pivot low in January 2006, just below the larger 1.618 extension point.

While we are talking about this chart I want to introduce another high-probability situation to help you from getting caught going short at the



**FIGURE 15.10** Transports Triangle Extension

bottom of the first wave of a new pattern. Follow the smaller extension lines near the top. What we do is measure the very last leg of the old uptrend to get a decent target for the first wave bottom of the new trend. As you can see, the 1.618 extension of the very last leg up is a good target for a first-wave bottom. We see this on many charts. This knowledge will do two things for you. First, it will keep you from going short in the face of a countertrend retest of the high. Second, when we get a first- or A-wave down that measures precisely 1.618 of the last small leg up, this is an incredible pattern-recognition change point. As opposed to pullbacks that continue the trend, when you see a leg that has these measurements, it's your clue the prior pattern has ended and a new pattern has begun. Simply put, when a drop off a high measures 1.618 of the last leg of the old trend, it's highly probable the larger-degree trend has changed from up to down.

Our final chart, in Figure 15.11, to exhibit the concept of measuring extensions off corrections can be seen on this bond hourly chart. Here is another case of an ABC flat correction in an uptrend where the extension caught the top of the move. Finally, the last leg measured 35 hours. This leg has continued down to the 110 area since this chart was placed in this book. Realize that when we are watching these charts in real time we don't know if the action is



**FIGURE 15.11 Bonds Double 261**

going to the 1.618, 2.618, or 4.23 extension. Once the price action surpassed the 1.618 extension at 112 on the way up, probabilities shifted for it to head for the 2.618 extension at 113. Of course, in the heat of the battle it requires a certain amount of patience to stay with a trade like this, especially if the move is choppy. If you were long here, in all likelihood what you would have done is kept a trailing stop and the market would not have taken you out. Also, the moving averages were not challenged in a strong move. Another observation on this chart is everything lines up except for the divergence. We also have a double top situation. Notice how the MACD does retreat in the face of the second high. You would have to scale down to a 15-minute chart to catch a good MACD divergence. Of course that also means you would have to take this trade on a shorter time scale, not matter what ended up happening.

Here are some more examples of what happens when we measure the final leg of a pattern against the start of a new trend. Here is an hourly chart of Harley Davidson in Figure 15.12. Check out the action on the final small leg up where I've annotated a small triangle. As you can see there is a large white candle at price point 64.50, which takes us right to the top. As you follow along in the new downtrend you'll see an A wave complete right near the larger 2.618 extension line of that small final leg up.



**FIGURE 15.12** Harley Davidson Hourly

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The question you may be asking yourself is why didn't it bottom at the 1.618 extension line? That's a great question. What we are discussing here are high-probability tendency points. There is no tooth fairy here as I've said any number of times. If you are looking for the 1.618 extension point as an end to the first-wave down, you may get it. How will you know? Look at this chart. When we hit that 1.618 extension point at about 63.60 it is on a big black candle, right? The most important thing to look for is a candle reversal bar. If you don't get it, chances are it's not bottoming there. Even if you get a paltry bounce, that's likely all it is going to be. What I want each and every one of you to remember is to wait for some kind of indication the chart is respecting the tendency. It could elect 1.618, 2.618, or 4.23. In this case we get a small morning star near the 2.618 extension line, which is also 37 (Fibonacci 38-1) hours down. That's your clue.

To me, once we hit a cluster of time (37 hours), price (2.618 extension), and candle (morning star) that should be your indication. If you are short you really need to tighten up your stops and don't give back profits. If you want to go long here for the leg that retests the high, this is your chance. For those of you who were thinking of going short here, forget it! Take this progression one step further and follow the smaller retracement lines going

the other way. We measure the last small leg of the downtrend and the first leg up of the retest hits major resistance at the 1.618 extension point! There is a real small tail, so your entry would be just above the black candle prior to bar 37 hours. This is just after that morning star completes.

Figure 15.13 brings home the same point. This chart measures the final leg of the uptrend, which concludes on a textbook-high wave candle. Just to reiterate, high-wave candles (small body, large tails in both directions) are kryptonite to a prevailing trend. Trends feed off certainty and conviction. High-wave candles imply uncertainty and confusion on the part of participants. Here, a pullback begins and the large black candle blows through the 1.618 extension, and it's obvious it isn't stopping there. If it doesn't stop there, odds are it's headed for the next one, which is 2.618. That is exactly what happens. It hits a low in the 15-to 16-hour window. Three bars up we get a good white candle and this turns out to be a blended morning star pattern.

Going the other way back up, follow the smaller retracement lines. As we measure the final leg down we also get a 1.618 extension point, which is going to be resistance on the way back up. When it hits that 1.618 resistance line it does so on the thirty-fourth hour on the way back up. We have a



**FIGURE 15.13** Host Hourly

cluster again of price (Fibonacci extension point) and time (34 hours). What is missing here? We don't have a candlestick reversal pattern so inevitably it retests that line once again. If you are going to take trades at these lines, have as many bullets as possible. Don't be afraid that you are going to miss a setup. There's always another one coming right around the corner. The problem is, you need to have the bankroll to take advantage of it.

Our final example of this concept is an hourly chart of GM in Figure 15.14. You have a virtual double top here as we have a dark cloud cover on Monday at 33.97 and a final high two days later at 34. On the time count (not shown) is the first high on the one hundred ninetieth day of the trend (Fibonacci derivative 189+1) and the double at the forty-eighth hour of the final leg. We are actually measuring the extensions off both final legs. This is a rather complex situation and I'm putting it here because I've given you enough easy setups to recognize and more often than not the market gives you something more complex to deal with. You'll know what to do if you want to participate. In this case the market elects to bottom on the 2.618 extension. Look how close that 2.618 extension is to the smaller 4.23 extension lines drawn off the second and final high. Once the trend reverses, you need to draw these extension lines



**FIGURE 15.14** GM 261 Extension

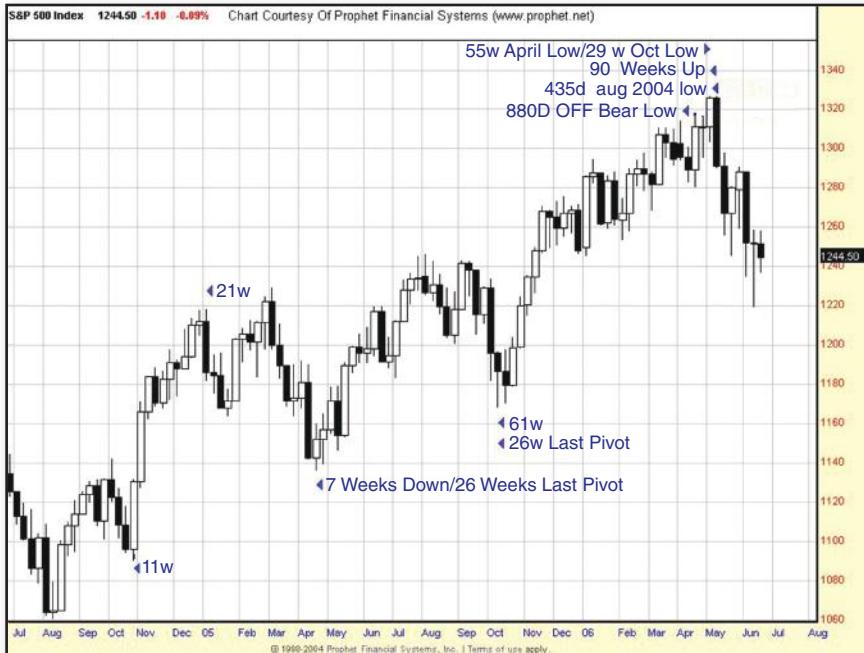
and wait for the price action to come to you. Finally, the entry for the short is just below that last white candle on Wednesday as that big black candle develops.

The key to making these advanced Fibonacci extension techniques work is patience. You have to be willing to let the chart come to you. What's the best way to do this? Develop a watch list of 10 to 15 charts ahead of time and keep populating that list. It's like a Ferris wheel. Some charts will be ready to take you for a ride right away and others will require you to wait for the wheel to go all the way around. What happens if you are waiting on a chart to get to 1.618 and it keeps going? Wait for it to get to 2.618. What happens if it doesn't reverse at 2.618? Wait for it to get to 4.23. What if it still doesn't reverse? Forget about it and go on to the next one. What if it reverses somewhere between 1.618 and 2.618? Without a greater inspection of the chart I'd urge you to take a pass. Odds are it's just spiking temporarily and will take you out eventually. The only way you would take a trade like that is if you have a perfect time bar and candlestick reversal pattern. Remember, markets will do whatever they want whenever they want. They don't have to follow these tendencies. What I'm showing you in this chapter are the highest-probability tendencies that are going to give you the best chance to win. You want to give yourself the greatest opportunity to win and profit every time you pull the trigger.

Our final concept is going to be buying dips and selling rallies. At best, this is an inexact science. We've covered this topic extensively in this book. As we've seen in the chapters on wave rotation as well as the section on O'Neil's *Investors Business Daily*, these cycles offer you an opportunity to understand the unique rhythm of financial markets. What you want to do is exercise a good degree of patience. The best thing to do is wait for a cluster of time bars on a high-to-high or low-to-low cycle. It's best to also wait for a candlestick signal that tells you the price action is actually respecting that time window.

## ■ S&P 500

Here are three charts of the S&P 500 in Figures 15.15, through 15.17. One is a close-up of the action. Take them one at a time and see how the concepts work together. Once again, these concepts relate to all time frames. We have an excellent progression off a very important pivot low back in August 2004. The first dip ends on an 11-week low-to-low cycle but the buy signal would be the time cycle combined with that big white candle. Your entry



**FIGURE 15.15 SPX I**

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BUILDING THE BRIDGE



**FIGURE 15.16 SPX II**



**FIGURE 15.17 SPX III**

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should be where the white candle clears the black from week 10. The next buy opportunity is after a 7-week correction that ends in a harami pattern. This 7-week pullback also clusters with a larger 26-week low-to-low cycle off the last major pivot. Is it a requirement that you also have that cluster? No, but you increase your odds exponentially if you have a combination of two time periods coinciding together and then you get that good candle going in your direction. Where is the entry? It's a difficult harami with a small white bar against a large black candle. The best thing to do in those situations is scale down to a daily time frame. The next opportunity comes as we hit a low on the sixty-first week of the pattern, which is also 26 weeks off the last pivot low. This also ends an 11-week correction. You have all of that ammunition in your favor right there, but no buy signal yet. Two weeks later on the sixty-third bar you get that nice white candle, which is your confirmation that you should pull the trigger.

Now that you've seen how the time bars work, check out the Fibonacci price retracements. There are three separate situations. The first one off the low retraces 61 percent of the first wave up. The second acceleration pulls back to retraces slightly more than 61 percent of the move from the wave two low. The third pullback (off the high) retraces slightly beyond

61 percent of the move off the April low but the wave calculations of the ABC down are such that  $C=1.618\times A$  as measured from the B-wave high.

I've shown you this on separate charts, because I want you to think in terms of price retracements and I also want you to think in terms of time. These are the kinds of situations you want to look for. Many times you'll get some combination of these signals, which are not perfect, and you may get stopped out once or twice attempting to shoehorn your way into a trade.

Just as a reminder because we've seen this chart before, compare and contrast how these time cycles line up with moving averages professional traders are following. We'll get to a strategy utilizing moving averages shortly but you can see how well the time bars complement the ability to buy the dip. These charts give the trend-following moving average crowd an opportunity to see how well their methodology works with the Fibonacci price and time discipline. Likewise, the Elliott/Fibonacci crowd gains a fresh perspective on how the trend-following crowd looks at the situation. The time bars are the unique language of the market and help both viewpoints.

Another condition to note is when we start looking at clusters of retrace-  
ment levels, we loosen our need to rely on the MACD. As we get into the  
clusters you won't see any lagging indicators.

The next chart (NASDAQ E-Mini), in Figure 15.18, is a similar concept. All we are doing is combining the price and time elements. We go from the weekly to the intraday time scale. In this case we have a simple ABC progression to the upside. What we do is draw the price retracements from both pivots. In bullish moves, the pullback will subside in the area of the 38 percent retracement level. Here we have a cluster of two 38 percent retracement points. The time element is important for the following reason. If you are working with five-minute charts you know how fast the action goes and how easy it is to make a mistake due to emotions. It's an uptrend and you want to be in. However, these charts don't have to stop at that 38 percent cluster. What ends up happening is we'll get to a price cluster and in the absence of a good time bar the chart will keep going. What I'm advocating here is the confluence of price and time. In this example we have the 38 percent cluster with the 13-bar cycle. It's a very high-probability play. Bar 14 confirms the action with the good white candle. Within the next hour there is a 13-point move and depending on the number of contracts you play could be anywhere from a \$260 to \$1,300 payday.

Here is another intraday chart. The same concept applies. As you can see we have twin 38 percent clusters as we draw the Fibonacci retracement lines from the two lower pivots. As you can readily see there are two 38 percent



**FIGURE 15.18 Twin 38 Percent Retracements**

lines. As this pullback begins, do we really know which one the chart is going to elect? Here in this book we can see what happened, but all I'm really doing is highlighting higher-probability tendencies. If you rely exclusively on the price action you are going to get confused and perhaps won't recognize the opportunity when it presents itself. Candlestick experts even tell you correctly you can't rely on anyone particular candle pattern. We've covered that in Chapter 4.

Here is what happens. We come to the first 38 percent line when we enter the 60-62 bar cycle window. This is why we've spent the whole book discussing the time dimension. We also have that bullish tweezers reversal at the exact right spot. Your entry is right above the high of the black bar of the reversal pattern. Here is a confluence of price, time, and candle formation. When you see this sort of setup you don't even have to think about it. Your brain should be wired automatically to take action. The time dimension is your high-tendency pattern-recognition tool that confirms the price retraction as well as the candle formation. You don't have to think about it being a fake out. As traders we want to be able to recognize winning situations and be able to take action. The next chart, in Figure 15.19, also shows you what happens in a shallow correction when the time bars line up.



**FIGURE 15.19** 62-26 Cluster

On the flip side, traders have a tendency to act in the wrong place at the wrong time. The reason they do that is because they don't have a good pattern-recognition methodology in place so they act out of emotion. That is precisely what leads to losses. When you get a series of losses your confidence waivers and then goes away altogether. So does the bankroll along with your career as a trader.

These last few charts give you a strategy of how to buy off a correction or a dip. They are simple in the fact that all you have to do is draw the retracement lines and keep track of the bars. There is usually one higher-probability spot on the chart that you can recognize. In strongly trending markets, the high-probability tendency is for the action to retrace 38 percent. There is also another simple way to buy the dip/correction.

## ■ Time Window Dips

Many traders follow a two moving averages to define a trend. The 50 period moving average is excellent, but the 20 is also very good in the short term which we discussed earlier. Some people like to use an exponential and

others a simple moving average. The various charts in this book suggest there isn't a real big difference. Here, we are concentrating on the bars anyway. The moving averages are used because visually there is less calculations. On this daily chart of Altria Group, in Figure 15.20, there was a 21-day correction that completed in September. This is a strongly trending stock that pulled back into the 20-day moving average on the thirty-fifth day of the leg. The next day there was a gap up which was the buy signal. While I haven't included that on this chart (for the benefit of trend followers), the thirty-fifth day small correction ends on the 38 percent retracement of the move up to that point! Notice how the trend progresses and the action pulls back to the 20-day moving average on the fifty-sixth and sixty-third day! Those of you in Australia also have slightly different version of Altria Group on the Sydney Exchange, but the principles are exactly the same.

We've seen this BBH chart several times in this book now called Figure 15.21. For ease of visibility, I've added the 20-day moving average and 50-day moving average. In a strongly trending market, the action pulls back into the 20-period moving average on the twenty-first, thirty-fourth, sixty-first, and seventy-ninth time bar. Each one of these situations offered an opportunity to buy the dip. We've spent a lot of time discussing what to do when there is a MACD divergence, and here's the high-probability play in a clean trending environment without the divergence. The 34 bar into the moving average is also the 38 percent retracement off the early April secondary low of this trend.



**FIGURE 15.20** 21-Day Pullback



**FIGURE 15.21** Time Window Dips

I've shown you several Fibonacci-based conditions to this point, which repeat over and over. If all you want to do is stick with Fibonacci extensions you'll be able to find adequate opportunities, but since the original version we had a financial crisis that made clear to me one never has enough tools in the shed. In the last few years we've seen an explosion of high-frequency traders who seemingly took over the markets. Markets are dynamic as patterns change from one day to the next as well as one wave to the next. When we come to an important pivot, market conditions will change on a dime. What worked yesterday may not work today or tomorrow, but will work again next month. What do you do between now and then? The good thing is no matter who controls the market they will always be subject to universal principles. Many of the latter methods in this book were uncovered by Gann about 90 year ago and are just as timely today as they were in his era. That being said, the rest of this chapter is designed to close the gap even further on our understanding of pattern recognition and our ability to capitalize on the opportunities they represent. We present opportunities from a pure pattern-recognition point of view without traditional indicators.

## ■ Bring in Gann

In Figure 15.22 through 15.24, the action is taken from our *Futures* update in early 2012 and it's a chart of Palladium. We combine our Gann work with support/resistance and/or trend line work. But the takeaway from this chart is the 144-degree calculation. As you can see, the square roots from the high and the low have a difference or a factor of 0.80. That translates to a move of 144 degrees. The point here is that traditional Fibonacci numbers will become important turning points on a square of 9. The 144 number is actually taken off a square of 12 as well, but you'll see and have seen either Fibonacci numbers or golden spiral numbers give us significant turns. What we like to see coming off a low is good urgency as the parabolic spike is pure short covering. Once the bears exit like that they are no longer around to short the market and by default it has a chance to go up. However, after the short-covering sequence real buyers do need to come in or it won't sustain. In this case every turn is either at or close to a prior support or resistance line. It's only when the secondary pivot forms that people come to realize the action doesn't want to go down any more and explodes to the upside. As you see here, the retest of the bottom comes right down to the very last burst to the bottom on the downside which means either the final selling was panic motivated, margin-type selling, or a little of both. Once that happens there are no more bears down there. As a sidebar, pay no attention to the bar counts in the 100,000 handle because this chart was derived



**FIGURE 15.22** Palladium Part I



**FIGURE 15.23** Palladium Part II

from a larger daily time frame. In case you are curious, this sequence was the last pullback before the final top at the end of February 2012. The 144-degree reading was good enough to get the price action up to a new high.

Finally, the third chart shows us a massive spike off a low. These are going to be more reliable off a bottom as opposed to near a top because after a long move the blow off will materialize because as the move gets more comfortable looking it will attract many types of traders as sentiment turns



**FIGURE 15.24** Palladium Part III

and people pile on. The spike coming off a low is more than likely going to be short covering.

Another sequence with a 144-degree move is crude oil in Figure 15.25. Here's a wedge off the low that rallies right up to polarity, which you can see on a 360-minute chart. This one is not exact, just a degree off, but it is under the influence of 144. What interests me about this trade is the double/triple high aspect, which is nothing more than a good retest of resistance. As the action progresses through the three charts, in Figure 15.26 and Figure 15.27, you can see that even after the last high it comes close to being retested yet again. If you put your stop above the high you are fine. Unfortunately this kind of volatility is a reality of trading. It's not fun and we'd prefer a much cleaner drop, but it is what it is. But eventually it drops below the rising trend line connecting the lows to retest the first leg low. That polarity test is also a high-probability failure point. Once polarity fails a second time, the bottom falls out. In trading these moves it's also important to realize these moves don't just happen. They set up slowly over time. The price action moves from resistance to support back to resistance and when it fails then the bigger move materializes. Putting all of the calculations aside, one of the reasons for the bigger drop on this chart is the people that bought the first low after the 145 annotation obviously thought since the action didn't fail, it likely wasn't going to fail. When you have moves that constantly retest the resistance area, a psychology of invincibility develops and people will continue to buy dips until it is proven not to work. Then when it doesn't work



**FIGURE 15.25** 144dg Move



**FIGURE 15.26 Oil Part II**

they all head for the exits at the same time. What the polarity failure does is create a trap door where those who bought late thinking it was a dip that would go to new highs find themselves quickly underwater with no way out. They panic, all head for the exits at the same time, and it causes the parabolic drop that you see. It also hurts, as these very same people see the trend line break and that causes panic as well.



**FIGURE 15.27 Part III Follow Through**



**FIGURE 15.28 Trend Line and Square of 9**

The next chart of silver, in Figure 15.28, combines trend line work with the Gann square of 9. Here we see the factor of 1.62 being the key to the trade. We have three reasons for this trade. First is the factor, but we wouldn't take a trade based on the number alone. This is also a pattern that is respecting the bottom of a trend channel and also gives us a good bullish engulfing candle formation. You should have at least two motivations to take a trade and if you can have three (with the really good candle) it becomes a



**FIGURE 15.29 Bigger Picture**



**FIGURE 15.30 NQ 161 Factor**

high-probability outcome. I've included the daily chart, in Figure 15.29, as you'll see the leg in the bigger picture and how it led to a 484-point move.

The next sequence, in Figure 15.30, also involves a 1.61 factor. There's a lot going on here so let's take it one step at a time. First of all the annotations are either the square root of the price or the end calculation and for your viewing ease, I try not to clutter up the chart with too many calculations, but they are correct. The high to the low is 49.35 to 44.35, a factor of five, which is a 900-degree move. That's excellent, as we've seen on the big oil chart. We get an important low. Remember, this is a 360-minute chart and this is the move from the August 7, 2011, critical low. What's important is the first retest of the low at 376 degrees, which is close enough to 377. The next two important pivots are the high of this move, which is at 709 degrees (close to 720), which is a retest of the high ridge on the left but also a nice polarity flip. The next low is at 378 degrees (close to 377). But the important calculation that kicks off the next big move, which is not so much the 289-degree, move but it turns out to be a factor of 1.61. That was the kickoff to the next important move down in Figure 15.31. On the second chart I included trend lines so you can see how all of this fits together. What we are doing here is combining candle formations, polarity, trend lines, and Gann readings. They all support each other at times, and the more justifications you have for a trade the better you are. Lots of times you won't get all of the factors lining up, but you should never take a trade with fewer than two reasons.



**FIGURE 15.31 Follow Through**

## ■ 36-Degree Moves

The next set is a sequence for Figure 15.32 and Figure 15.33. They are either five small waves down or an ABC down. Whatever the case we have a wedge that forms on a retest of a prior support level that leaves a lower tail. All of these conditions are good enough to take a trade by its own merits. However, when we add in the square roots of the high and low we get a factor of 0.20, which translates to a 36-degree move. The 36 derivative is one



**FIGURE 15.32 Bonds Part I**



**FIGURE 15.33 Bonds Part II**

of the best readings we can get in the world of Gann. So what that does is allow you to develop some conviction about the move. Conviction is going to be important as the pattern gets to the declining trend line for the wedge. Do you stay or do you go? In this case it's easy because prices sliced right through and it's my contention they did because the 36-degree reading made it a superior setup to begin with. But you can see as the move progresses it goes up to the first serious resistance at the horizontal line. If that was all you did it was already a successful outcome. In a case like this, first serious resistance becomes the target for the trade. You can take some off the table, let a trailing stop take you out, or pull the plug if you like.

The best trades come from strong fundamental pattern recognition and as we've seen the concept of polarity is very reliable. You won't always get it, but if the pattern gives you a retest of a polarity line that could be even more powerful. But trading in real time is a lot different than looking at these charts after the fact in a book like this. What the Gann reading, in Figure 15.34, does is help you get conviction about a move. As I said you need at least two motivations to take a trade. In that vein, it's similar to our Fibonacci work where we are looking for two or more reasons where we had a time window and one or more Fibonacci extensions. Here you get a Gann reading and a flip in polarity on the dip.

This is a different strategy, but still looking for a calculation and a reaction on the chart. What polarity flips usually do is create a situation, when



**FIGURE 15.34** Good Buy the Dip

the next pivot is tested, the odds go up greatly that support or resistance (whatever the case) will be taken out. The only difference in these last two 36-degree examples is the bond chart comes off a low and doesn't have a polarity flip while the gold chart isn't at a bottom and polarity does flip, which allows the next high to be eclipsed. Let's look at a few more 36-degree setups.

The next five-minute chart is a breakout of a triangle that retests a high but look at the low and the high with square roots of 49.44 and 49.64. That factor/difference of 0.20 should make bells and whistles go off in your head, especially when it's at an important resistance line. In terms of Elliott this could be a fourth wave triangle and you know that is usually the next to last move in the sequence. In intraday trading you don't need big moves to make money and what you see here is already good. The two justifications here are the 36-degree calculation and the retest failure at resistance. These legs off highs that test into triangles normally have a target at the apex of the triangle.

The next two charts below combines a 36-degree calculation with trend lines and Andrews pitchfork as well as the candles in Figure 15.35 and Figure 15.36. Do you see a theme? We are using variations of the same thing and the central theme is where lines meet numbers. You can make these trades without the numbers or without the lines, but you won't have the conviction to stick with the move and realize that all pivots are not the same.



**FIGURE 15.35 36 Degrees and Trend lines**

Our final 36-degree example is a little more complex, as seen in Figure 15.37. This one is difficult to catch. What we have here is a short covering bounce off a low and a pullback that is 34.2 degrees in distance off the peak, but it is 36 degrees in distance off the low. What that does is kick off a massive third- or C-wave higher. I don't think this is a very good trading example as much as it is just an example to show you how creative you can be in your own pattern-recognition studies.



**FIGURE 15.36 36 Degrees and Andrews**



**FIGURE 15.37** 36 Degrees and Short Covering

## ■ 90-Degree Moves

Similar to the 36-degree move in strength and reliability is the 90-degree move. The next example SU, in Figure 15.38, has a very interesting dynamic. We have either a first- or A-wave low and a retest of the high which fails at exactly a 90-degree move. That's still not the trade. The trade is the retest failure of the 90-degree line. Retests of support and resistance are very high-probability trades. The 90-degree resistance will repel most challenges unless the underlying structure of the market is very strong. On the larger chart below I've included the square roots of the high and low so you can see the 0.50 factor which sets up the 90-degree calculation. The key to this trade in Figure 15.39 is the evening star on the resistance line. You don't get this confluence of factors every day, but when you do it has the potential to lead to a bigger move. In this case it leads to a full-blown bear phase in the entire market. As it turned out, this calculation materialized the same week as the oil chart at 609 degrees/903 degrees I showed you earlier at the big May 2011 turn. Most interesting is that while the oil chart gave us a rare perfect storm of relationships, this oil stock did as well.

Before we leave this chart let's look at the final opportunity. Later on in the progression, in Figure 15.40, there's one more bounce, which bounces to a confluence of prior resistance and earlier polarity, expressed by the horizontal line. We have a factor of 0.40 (6.47-6.07), which is a 72-degree move. Earlier you saw the 144-degree pivot. At half of 144 and also a part of the square of



**FIGURE 15.38 SU 90dg Move**

12, 72 is an important number in the world of Gann. It carries almost as much weight as a 144-degree move. But the concept is the same; we have a reading at the same time as a test or retest of an important area on the chart. As you can see it leads to the most explosive move of the entire sequence.

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In looking at these charts we see that square of 9 calculations can be very reliable but they are not guaranteed, nothing is. The best we can ever hope to do is manage the probability of uncertainty. What happens when these calculations do not hold?



**FIGURE 15.39 Part II**



**FIGURE 15.40 SU 72dg Move**

The next chart is BAC, in Figure 15.41, in the same month as SU and this time we have a confluence of factors including an 89-day low as well as a decent square of 9 reading at 315 degrees. Not only that but trend line analysis suggests the pattern might seriously be ready to bounce. It's important not to front run the bars even with a Gann reading, because you can see nothing really happens. After a brutal downturn, a high-probability reversal will include short covering first and you've seen that short covering is expressed by a spike wide range bar off the low. If there is no short covering, chances



**FIGURE 15.41 89 Day Low**



**FIGURE 15.42 Failure**

are there will be no turn. As the move off the low develops, it should be obvious that something is wrong. Nothing is happening! What happens when nothing materializes after a good confluence of readings? It means the underlying structure of the market is very strong with that prevailing trend. The bounce attempt fails in Figure 15.42 and other banking stocks reach their parabolic phase. You've seen the BKX earlier; this sector didn't bottom until October. In this case it's only early June.

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Here are a couple of quick sequences on the XAU chart Figure 15.43. To the left we have a selloff commence as a result of the 618-day window



**FIGURE 15.43 261dg Move**

off the 2008 bottom that is part of a much larger trading range. More important to this chapter is the next high which becomes a connect-the-dots trend line of resistance which peaks at 261 degrees. Here's an example of a golden spiral number being the key reading. That is derived from the factor of  $15.13 - 13.68 = 1.45$ , which is 261 degrees.

As you leave me and go on your own, feel confident that you are prepared to deal with most market conditions you are ever going to see. In sports, championship teams need to be flexible and play different styles against different opponents. They constantly need to make adjustments on the fly. The teams that are able to adjust win championships. The teams that don't adjust never get the big prize. You can adjust to changing market conditions. You can play the retracement game on pullbacks and the divergence game to pick tops and bottoms. You can also use the advanced calculations to project longer-term targets. Finally, you can also recognize a moving average cluster with the time calculations for very high-probability trend-continuation signals.



# Conclusion

We've come on a very long journey, and if you are with me to this point, congratulations! If you've read this book through without paying too much attention to the charts you need to go back and study them one by one. Take as much time as you need. This is the kind of book you'll come back to over and over. There is so much more here than the first edition. I wanted to expand on the timing principles we discussed in the original, but I also want you to recognize how deep the catalog of pattern-recognition opportunities are in financial markets. Every time you go over these charts you'll learn something new. Every time you go over these charts you'll pick up something you didn't see the last time. You'll come to these charts and apply them in real time to your favorite charts.

## ■ Courage of Your Convictions

There's the macro and the micro. We spend a lot of time studying the bigger picture because what I find happening is that many people sign up for help only after they lose a lot of money. They lose because they don't understand the trend change. You can make \$5,000 or \$10,000 in a bull or bear market, but give it right back in the first couple of months after the market reverses. What good is that? That's one part of it. The other part is recognizing good symmetries at the turns, not because it makes you a hero or feeds your ego. You want to know these symmetries because its going to give you a significant edge on the competition. You may not always be right. When pundits go on television they are always asked what they think the market will do. Much of the time they are guessing or hoping. Other times they talk

about valuations and fundamentals. That may be true, but we all know that markets can stay over- or under-valued for a long time. That's not the secret to this business. When someone asks you what your market opinion is (it may only be your Joe Gremlin) at least you'll have an educated opinion. That opinion will matter to the degree you develop the courage of your convictions to act. When you see a market turn at 58.81 in 59 weeks, you'll start to develop conviction. When people find out these symmetries are what is really driving the markets, they are surprised. Well, Gann was doing this work nearly a century ago.

What you will find is the more you practice, the better you'll get. Your results are going to be in direct proportion to the due diligence you put into this project. If you reached this point after weeks of studying these charts individually I'm really proud of you. What you now have is one of the finest pattern-recognition systems on the planet. As you know, it's not perfect because markets will do whatever they want whenever they want. We can't control nature. However, we can control ourselves. What I've attempted to do here is greatly improve on existing methodologies in technical analysis. Twentieth-century technical analysis is very good, but it has a lot of holes in it. We've reduced the margins for error. Hopefully, what I've done here is reduce the number of times you'll get stopped out because you are going to recognize the highest-probability setups.

For those of you who are new, you've learned the true nature of how financial markets really work right from the beginning. I've started this book one step at a time building upon Fibonacci and Elliott concepts many of you have learned elsewhere. The important point to note is they still work, but they don't work as often as others have told you. Over the years I've found glaring holes in common Fibonacci and Elliott methodologies. Since the first edition I undertook a serious study of Gann. Actually Gann was around way before Elliott and probably before people starting looking to Fibonacci calculations as a basis for measuring waves.

So why hasn't Gann caught on the way the others have? Gann is more complex and mysterious. He wanted it that way because he didn't just want to give you the goods. He gave you the framework and wanted you to figure it out for yourself. It happened for some people, as each generation has their Gann experts. But for the most part, the Wall Street culture has kicked Gann to the curb. It's a shame really, because it costs the public a lot of money. I always come back to that example of the oil chart in May 2011 where we had the perfect storm of Gann and Fibonacci

cluster and the result was a massive change in the direction in just about everything overnight. That hedge fund that lost all the money was quoted as saying they had no idea why the market reversed. Is that what you tell your clients?

I may have presented you the chart and taught you how to recognize the massive reversal, but Gann was preaching this stuff 80 years ago. The problem is few were listening.

What of our very first chart in this book? We've come full circle. The 262-week peak in the markets in 2007 was the watershed event in our lifetime. Anyone who learned the concepts and methods in the first edition could've figured it out for themselves. As it turned out, that edition came out several months before that peak. In this edition we had a new discussion on market psychology. That discussion reflects a market event that has created the same kind of scars our grandparents had to deal with from the 1930s onward. Our generation is always going to be marked by the 2008 disaster.

It affected the Euro negotiations in 2011 and 2012 and also the debt ceiling negotiations as 2012 came to a conclusion. These negotiations highlighted the fact the markets are indeed a zero-sum game. The calculations at the 2009 bottom are excellent, they could be generational, but just like the top, most missed the bottom and the significance of it as well. This is why we see sequences where bears can't keep the conviction to stay with moves as they are all expecting to see the next Lehman moment, which hasn't happened as of this writing. We see sequences where bears take it down on bad news and cover on good news. These cycles repeat endlessly and it's important for traders to understand what is going on.

So what is the best defense against the crazy 24-hour-news driven events that may be prompted at least in part by high-frequency trading? It's a complete game plan to understand the macro to stay on the right side of the market while coming up with macro strategies to deal with the short term. The first edition concentrated on Fibonacci work clustering with a lot of the common indicators on all software packages. The MACD created by Gerald Appel in the late 1970s certainly has its value, and is used by many beginning, intermediate, and even advanced traders. As a stand-alone system I always thought it had its flaws, as you've seen in the middle of the last decade. I think its best use is as a swing trading tool, but the flaw is it will stay extended and give false signals which can get the trader in a lot of trouble. Thus we married it to advanced market timing and made it more effective. As you've seen, you can combine a MACD

with market timing and catch important moves, which will decrease your ratio of being stopped out.

Then we combined timing windows with Elliott Wave and Fibonacci work to take a lot of the subjectivity out. To make these methods work, it requires a lot of patience because these elements don't line up every day but when they do, you get very high-probability turns.

What we wanted to do after the first edition is increase the number of opportunities a trader can capitalize on because the market changed and became more challenging. The fact we had a generational disaster none of us had seen before meant we needed more methods in the toolbox to compete in an always-challenging environment. If the last four years has taught us anything, it's we were not prepared for the first Lehman moment and because of it, we stand ready waiting for the next one which might not be coming for a while. Because of the financial crisis, many traders were not prepared for the aftermath that turned into a multiyear bull market. So what happens next?

It really doesn't matter. With this book you have a very comprehensive toolbox. You won't need to use all of these tools all the time. In fact, it works against you if you did try to do that because the biggest enemy of the trader is paralysis by analysis.

## ■ Shanghai Study

So what I suggest you do is when we get an important turn put on your detective's cap and do your due diligence to figure out why a turn has materialized. As of this writing the most interesting turn had just materialized in the Chinese SSE, shown in Figures 16.1 and 16.2. As you may know, this chart has been in a brutal bear market since late 2007. In early 2011, economists, financial experts, and government officials were expecting a soft landing for the economy. Now we know that the expectation of a soft landing is either early-stage bear complacency or a bear that has just not progressed to the point where it could bottom. Over the next year and a half the expectations changed. Headlines started anticipating a hard landing. The bear had done its work. Let's take a look at the macro picture.

First of all the most important piece of information on this chart is the top. The top came in at 6124.05. The next thing you will see is the turn coming in at approximately 61.6 months. Does the turn at 61 months have anything to do with the top? It might, but it gets more interesting. You can see from the weekly chart the low comes in at just over 262 weeks.



**FIGURE 16.1 SSE Part I**

Before you send any letters to either me or the publisher, realize that from top to bottom it's actually 268 weeks in normal time, but unlike U.S. markets, the Chinese close down for various holidays and festivals. But market precision takes everything into consideration and operates on its own time. The square root of the top is 78.25. On Monday, December 3, 2012, it tried to find a low at 1957.89. When we apply our Gann formula we get a factor rounded to 34.01. That gave us a square of



**FIGURE 16.2 SSE Part II**



**FIGURE 16.3 SSE Part III**

9 reading of 6121.8. I was on high alert at that point. Well, the next morning it went slightly lower and gave us a final low of 1949.46, which has a square root of 44.15. When we take 78.25 and subtract 44.15 we get a reading of 34.10, which translates to 6138 degrees. This isn't perfect but it's very close to being 6124 degrees after a peak of 6124 at 262 weeks and 61.6 months. Finally look at what happened in December 2012. At the very least, you don't want to be short going against this cluster of Gann and Fibonacci relationships.



**FIGURE 16.4 SSE Part IV**

While this pivot eventually was taken out months later, here you have one of the most impressive combinations of Gann/Fibonacci data you will ever see, which produced one of the most impressive lifts off a brutal bear market that you'll see. Finally, in Figure 16.4, you see how the near-term high materialized. It came in on a range of 495 points while the square root of the high was 49.44, which is really close. Put the readings aside for the moment. Look at the massive overhead resistance that was a challenge to this chart when it turned. You can make a case for a triangle and when a pattern comes off a bottom to test a triangle it normally moves in fits and starts until it finally breaks through. This one demolished overhead resistance like it was nothing. In the long term, even if it were to find a new bottom at some point down the road, the damage done to the bear by demolishing this set of overhead resistance is likely to be long lasting. As far as trading this, you need to be advised of the readings and respect them by either being out as a short or considering a proper entry on the long side. As far as short-covering legs go, this is one of the best you'll ever see because parabolic movement off a bottom is the hallmark of bears exiting with their profits. Some of the latecomers might have been squeezed, because this looks like a combination of profit taking and panic. But what you should also take under advisement is the fact that there are dramatically fewer bears in this market than before, so it gives you a greater chance of having a long trade work out. But all of this information stems from understanding not only the market-timing aspect of the chart but taking the time window and adding the Gann work to it so we can see that time windows that come attached with good symmetry have a high probability of working out and are very powerful. This combines some psychology, market timing, price and time squaring, and near-term technical pattern recognition.

You won't have this opportunity on every chart. But most charts will give you some combination. Look at the best charts in this book as the standard. Then you'll realize how much junk there is in the market as you'll find so many charts, pivots, and setups without readings. Those tend to fade. The idea in trading is to be patient and disciplined. You shouldn't be trading everything you see. But when you do, you need to leverage it into your favorite trading opportunities as we mentioned earlier.

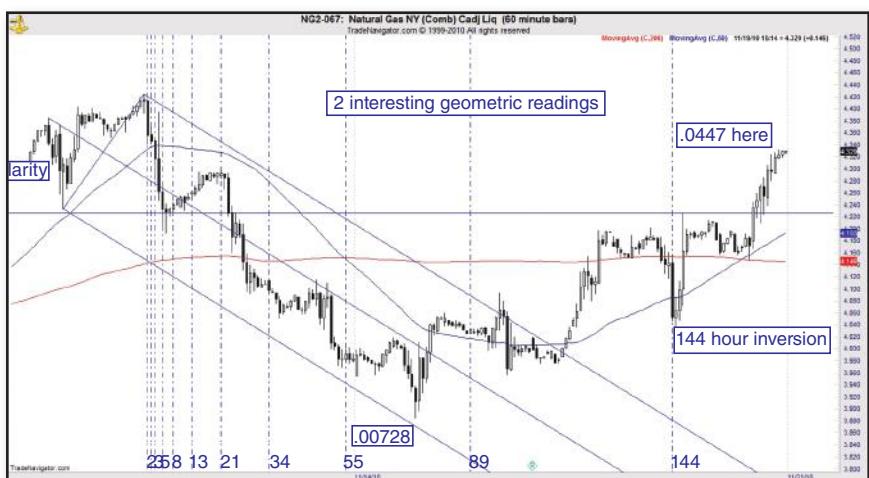
Now let's look at another interesting setup that I had only seen one time before during the financial crisis because of the 233 period gap down, in Figure 16.5.



**FIGURE 16.5 233 Gap Down**

## ■ Pattern Recognition Is the Key

For this particular setup to work, you need to understand basic Fibonacci timing and the pitchfork. Most of the time we are going to see our important time windows give us a high, a low, or an inversion. Let's look at a couple of inversions really quickly. In Figure 16.6, the inversion turns back up. In Figure 16.7, the turn is just as interesting.



**FIGURE 16.6 144-Hour Inversion**



**FIGURE 16.7 261-Hour Inversion**

Each one of these charts produces neither a high nor a low, but pulls back into the important time window. The numbers on the first chart are beyond the scope of this book but basically give us a ratio of the number of points to the number of time bars and when we get readings that are either Fibonacci or geometrically based, we can get important turns. They just happened to be on these charts, so I didn't want you to wonder about them. The important point is the inversion. So highs, lows, and inversions are fairly common themes in market timing. Every so often we get something really important.

On this Nat Gas chart, in Figure 16.8, is the bigger picture of the earlier Nat Gas drop where we have the exact repeat of what happened during the crisis when the Lehman bankruptcy coincided with the 233-day window off the top of the Dow from 2007. It became a runaway acceleration point. Here we had the exact runaway acceleration point right on the mid line of the Andrews median channel. I've never seen anything like this before or since. You can easily see the disaster that followed. The takeaway is if and when you see something like this you need to treat it with the respect it deserves. If it was just a gap down on a midline it would be important, but the gap down on a 233-hour window makes it even more important. As I've said many times in this narrative, the most important thing you have going for you is your conviction. What the time windows and Gann symmetries do for you is give you that conviction that a move can continue beyond your anticipation or expectation. If the key to making money in financial markets is letting your winners run, it most definitely is going to be the setups that



**FIGURE 16.8 Lehman Redux**

have the important calculations that are going to run. If you come to realize it, this could be your most important breakthrough strategy.

Finally, when you get these readings that put you on the right side you can start to look for your micro opportunities. Here you are limited only by your creativity. As it turns out this particular low in Nat Gas is a combination, shown in Figure 16.9, of a parallel warning line and the ratio of points to hours, which gives us a 45 derivative. The chart that follows gives us a combination of the square of 9 reading at 160 degrees and an excellent



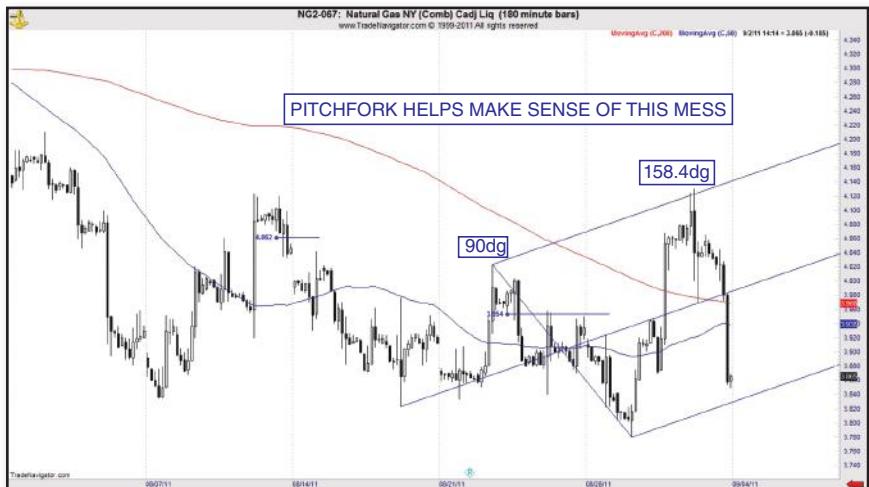
**FIGURE 16.9 Parallel Warning Low**



**FIGURE 16.10 Golden Spiral Gann Reading**

candle reversal formation in Figure 16.10. You don't have to rely only on the Fibonacci tool, although you can if that's what you like.

If you really take a liking to the pitchforks, you can combine them with square of 9 work and allow them to make sense out of the pattern for you. Here in Figure 16.11, we have an important 90-degree peak which later on is followed up by a bearish engulfing candle at the top of the channel with a Gann reading close to 161 degrees but not perfect. The takeaway here is if other tools are perfect (like the candle and median channel) you



**FIGURE 16.11 Gann Andrews**

don't need perfection when it comes to Gann. Close enough is usually good enough.

In fact if you have a perfect polarity flip like you do on the next chart, you should not even worry about the Gann reading. When dealing with micro situations you look to the combination of the reading, candle formation, and technical situation with the support and resistance and/or pitchfork and make a judgment call.

At the end of the day, trading is nothing more than managing uncertainty. It's about managing probability and risk. Nobody rings a bell at the top or bottom, although when you see things like the SSE bells and whistles ought to go off in your head. Most of the time you'll have one or two of the elements and you'll have to make a decision whether to go or not. By watching patterns religiously, tuning into market psychology, and the constant practice of developing your neuroplasticity you'll find yourself constantly getting better.

Finally, the most basic element of the setup for the big move, not knowing any of the market timing skills you've learned, is the polarity flip. Retests of old support and resistance levels is the most basic trading opportunity that leads to the big move in Figures 16.12 and 16.13.

This is the most basic opportunity that leads to a winning trade. In this conclusion we started with the macro and worked all the way down to the most basic. Your job is to understand the right side of the market and then



**FIGURE 16.12 Great Polarity Flip Part I**



**FIGURE 16.13 Great Polarity Flip Part II**

use your creativity to find these opportunities. Pick one or two at first and expand on them. Realize the more reasons you have to take a trade, the more conviction you should have. Fewer reasons for justification means you should be patient and wait until a setup materializes. This ES chart has one or more justifications built in as it has 71 bars (Gann 72) off the low at a 61 percent retracement where you have an ABC where the C is close to being 0.618 of the whole, but the basic flip in polarity is the bare-bones minimum for a winning trade. It might not have the perfect candle reversal formation, but it has everything else.

At the end of the day, if you faithfully develop and learn to recognize time windows and price/time square symmetries, you'll not only make breakthroughs in your understanding of how financial markets really work, but you'll identify where you have an edge and where you don't. The whole idea is to develop conviction about a move because that will separate a breakeven person from a consistently profitable person. It's not easy to have conviction in fast-paced, emotional markets. But as we close consider you could have leveraged different opportunities if you had comprehended some of the more important charts in this book. These opportunities will materialize again as markets get important turns several times a year. It's my hope you'll be in a position to make a major breakthrough the next time the market does turn.



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